JANUARY 15, 1950

MODERN MEDICINE

The Journal of Diagnosis and Treatment

Dr. Hans Seyle
(see page 11)

Table of contents page 11

Gives the cough relief your patient wants...

Leaves the cough reflex he needs

In the average case, it's usually possible to control the patient's cough—but often it's a real problem to do it without impairing the cough reflex he needs to keep bronchioles and throat passages clear. That's where you'll find pleasant-tasting Mercodol unique!

For Mercodol contains the cough-controlling narcotic[1] that gives better antitussive action than codeine or heroin, yet keeps beneficial cough reflex . . . a superior bronchodilator[2] to relax plugged bronchioles . . . an effective expectorant[3] to liquefy secretions. And you'll find Mercodol notably free from nausea, constipation, retention of sputum, and cardiovascular and nervous stimulation.

MERCODOL®

AN EXEMPT NARCOTIC

The antitussive syrup that controls cough—keeps the cough reflex

Merrell
1828
CINCINNATI • U. S. A.

Each 30 c.c. contains:
[1]Mercodinone* 10.0 mg.
[2]Nethamine® 0.1 gm.
[3]Sodium Citrate 1.2 gm.
*Trademark.

"A safe and effective drug to use in controlling weight gain  during pregnancy."

Coopersmith, B.I.: Dexedrine and Weight Control in Pregnancy, Am. J. Obst. & Gynec. (Oct.) 1949

Coopersmith reports the successful use of 'Dexedrine' Sulfate Tablets for weight control in a series of 100 obstetric patients. Because 'Dexedrine' curbed appetite and thus enabled these patients to follow their prescribed diets, control or reduction of weight was achieved in virtually all cases.  It is noteworthy that other methods, including the use of thyroid, had previously failed to prevent excessive weight gain in these same individuals. "Thyroid", Coopersmith states, "increases the appetite . . . and is toxic in many cases."  "Dexedrine Sulfate", the report concludes, "is a safe and effective drug to use in controlling weight gain during pregnancy."

Smith, Kline & French Laboratories, Philadelphia

Dexedrine* Sulfate tablets • elixir

for control of appetite  in weight reduction

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

[redacted]

safe and effective reduction
of elevated blood cholesterol
with lipotropic therapy

"Clinical and experimental observations indicate that lipotropic factors [choline, methionine and inositol] . . . prevent or mitigate the deposition of cholesterol in the vascular walls of rabbits and chickens and seem to exert a decholesterolizing effect on atheromatous deposits in man, chickens and rabbits."

These findings suggest the therapeutic possibilities of lipotropic Methischol in the prevention and possible treatment of atherosclerosis.

methischol®

Suggested daily therapeutic dose of 3 tablespoonsful or 9 capsules contains:

*Choline Dihydrogen Citrate (Choline . . . 1 Gm.)**	*2.5 Gm.*
dl-Methionine	*1.0 Gm.*
Inositol	*0.75 Gm.*
Liver Fractions from	*36.0 Gm. liver*
**present in syrup as 1.15 Gm. choline chloride*	

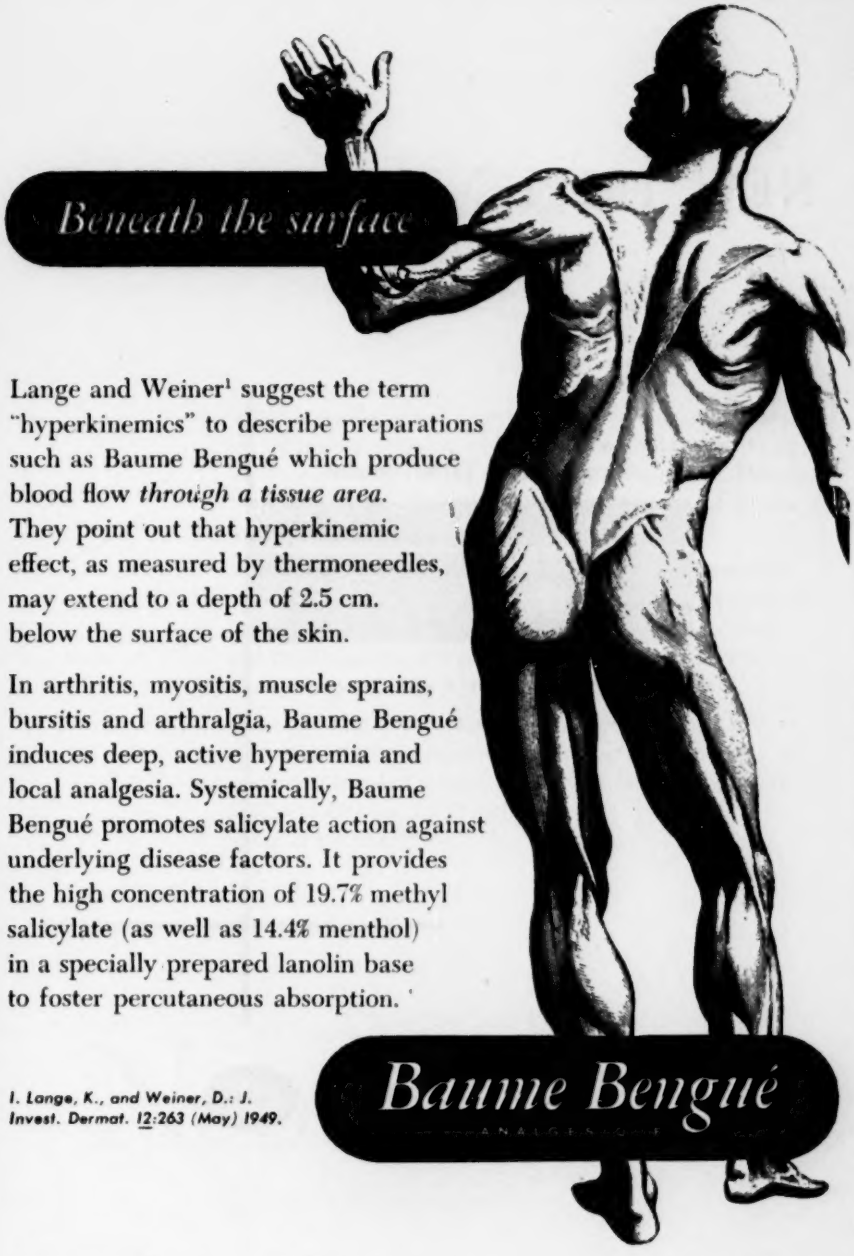
methischol

Supplied in bottles of 100, 250, 500 and 1000 capsules, and 16 oz. and one gallon syrup.

combines major lipotropic agents
for specific therapy in reparable liver damage . . . cirrhosis,
fat infiltration, functional impairment,
toxic hepatitis, infectious hepatitis.

write for samples and literature

u. s. vitamin corporation
casimir funk laboratories, inc. **(affiliate)**
250 east 43rd st., new york 17, n. y.



Lange and Weiner[1] suggest the term "hyperkinemics" to describe preparations such as Baume Bengué which produce blood flow *through a tissue area.* They point out that hyperkinemic effect, as measured by thermoneedles, may extend to a depth of 2.5 cm. below the surface of the skin.

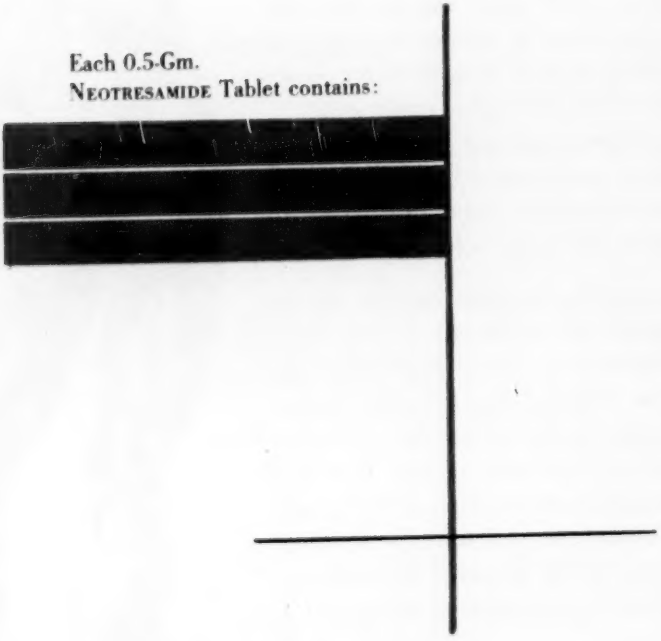
In arthritis, myositis, muscle sprains, bursitis and arthralgia, Baume Bengué induces deep, active hyperemia and local analgesia. Systemically, Baume Bengué promotes salicylate action against underlying disease factors. It provides the high concentration of 19.7% methyl salicylate (as well as 14.4% menthol) in a specially prepared lanolin base to foster percutaneous absorption.

1. Lange, K., and Weiner, D.: J. Invest. Dermat. 12:263 (May) 1949.

Thos. Leeming & Co. Inc. 155 East 44th Street, New York 17, N.Y.

NEW TRIPLE SULFONAMIDE

Each 0.5-Gm.
NEOTRESAMIDE Tablet contains:



SHARP & DOHME

reduces Renal Crystalluria!

Renal crystalluria and toxic reactions, hazards of sulfonamide therapy, are reduced to a minimum by NEOTRESAMIDE Tablets, Sharp & Dohme's new triple sulfonamide. Moreover, the necessity for alkalization is eliminated in most instances.

NEOTRESAMIDE Tablets provide sulfamerazine, sulfadiazine and sulfamethazine, the least toxic systemic sulfonamide combination. These sulfonamides as combined in NEOTRESAMIDE Tablets are more completely absorbed and rapidly excreted than when administered separately. High therapeutic blood levels are attained rapidly.

NEOTRESAMIDE Tablets are particularly effective in treatment of pneumococcic, streptococcic, gonococcic, meningococcic and staphylococcic infections. Supplied in bottles of 100 and 1,000 tablets.
Sharp & Dohme, Philadelphia 1, Pa.

Neotresamide.

Tablets Triple Sulfonamide

MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

for injections without objections

VIM needles are made of "La
stainless steel, which, unlike many
of steel, can be heat-treated and
given a true spring temper.
Consequently, VIM needles take
and *hold* a razor edge of lasting keenness. That's
why VIM injections are
easy to give, and —
just as important —
easy to *take*.

S P E C I F Y

VIM

Trade Mark Reg. U.S. Pat. Off.

hypodermic needles and syringes *Available through your surgical supply dealer*

MACGREGOR INSTRUMENT COMPANY, NEEDHAM 92, MASS.

two simple twists . . . 5 seconds

Time saving is made easy with the newly designed disposable syringe for ***"Duracillin"*** (Crystalline Procaine Penicillin—G, Lilly). Just two simple twists of the wrist, and it's ready to use. Because it is presterilized and the dosage premeasured, it eliminates needless bother—saves precious time. Take this less pressing moment to order a supply for the daily occasions when every second counts. Complete literature on disposable syringes for ***"Duracillin"*** is available from your Lilly medical service representative or will be forwarded upon request.

Lilly

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

Contents for January 15 1950

VOL. 18, NO. 2

THE MAN ON THE COVER is Hans Selye, M.D., physiologist, biochemist, and endocrinologist, whose special interest is internal secretions, particularly those concerned with the alarm reaction. Dr. Selye is Professor and Director of the Institute of Experimental Medicine and Surgery at the Université de Montréal, Montreal, Canada. In addition to his administrative, teaching, and investigative activities, Dr. Selye is a lucid and prolific writer. He is author of the report on the adaptation syndrome which is reviewed on page 65.

Contents for January 15 1950

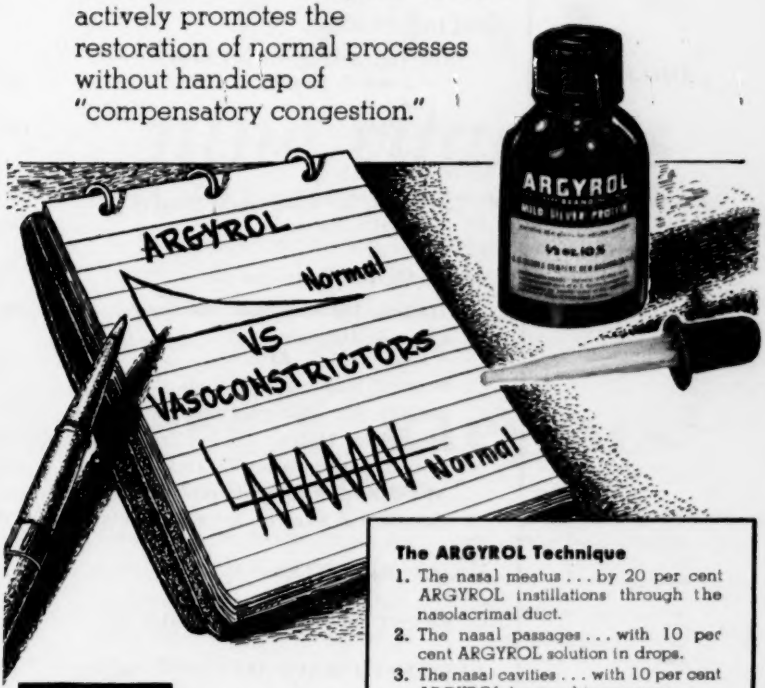
CONTINUED

In Para-nasal Infection **ARGYROL**

attains the objective...

a return to normal... without congestive rebound!

ARGYROL is bacteriostatic, demulcent and detergent. Its use actively promotes the restoration of normal processes without handicap of "compensatory congestion."



ARGYROL — *the medication of choice in treating para-nasal infection.*

SPECIFY THE ORIGINAL **ARGYROL** PACKAGE

Made only by the
A. C. BARNES COMPANY
NEW BRUNSWICK, N. J.

ARGYROL *is a registered trademark, the property of A. C. Barnes Company*

The ARGYROL Technique

1. The nasal meatus . . . by 20 per cent ARGYROL instillations through the nasolacrimal duct.
2. The nasal passages . . . with 10 per cent ARGYROL solution in drops.
3. The nasal cavities . . . with 10 per cent ARGYROL by nasal tamponage.

Its Three-Fold Effect

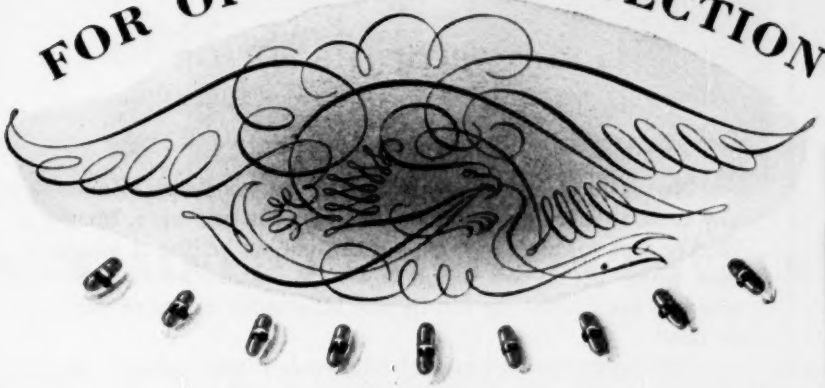
1. Decongests without irritation to the membrane and without ciliary injury.
2. Definitely bacteriostatic, yet non-toxic to tissue.
3. Stimulates secretion and cleanses, thereby enhancing Nature's own first line of defense.

Contents for January 15 1950

CONTINUED

MODERN MEDICINE, The Journal of Medical Progress, is published twice monthly on the first and fifteenth of each month at Minneapolis, Minn. Subscription rate: $5.00 a year, 25c a copy. Business Manager: M. E. Herz. Address editorial correspondence to 84 South 10th Street, Minneapolis 3, Minn. Telephone: Bridgeport 1291. ADVERTISING REPRESENTATIVES: New York 17: George Doyle, Bernard A. Smiler, Lee Klemmer, 1 East 42nd Street, Suite 801, Corn Exchange Bank Bldg. Telephone: Murray Hill 2-8717. CHICAGO 6: Jay H. Herz, 20 North Wacker Drive, Suite 1921. Telephone: Central 6-4619. SAN FRANCISCO 4: Duncan A. Scott & Co., Mills Bldg. Telephone: Garfield 1-7950. LOS ANGELES 5: Duncan A. Scott & Co., 2978 Wilshire Blvd. Telephone: Dunkirk 8-4151.

FOR OPTIMUM PROTECTION



nine vitamins

A • B_1 • B_2 • B_6 • Nicotinic Acid • Pantothenic Acid • C • D • E

Nine vitamins—A, the B-group, C, D, E—are available in ABDEC® KAPSEALS® for well-rounded vitamin therapy. You will want to prescribe ABDEC KAPSEALS to overcome vitamin deficiencies quickly and to insure optimal intake of essential nutrients.

ABDEC® KAPSEALS®

comprehensive vitamin therapy

Dosage: For the average patient, one ABDEC KAPSEAL daily; during pregnancy and lactation, two Kapseals daily. Three Kapseals daily are suggested in febrile illnesses, for pre-operative and post-operative patients, and in other situations in which vitamin deficiencies are likely to occur.

EACH ABDEC KAPSEAL CONTAINS

Vitamin A	5,000 U.S.P. units
Vitamin D	1,000 U.S.P. units
Mixed Tocopherols (Vitamin E factors)	5 mg.
Vitamin B_1 (Thiamine Hydrochloride)	5 mg.
Vitamin B_2 (Riboflavin)	3 mg.
Vitamin B_6 (Pyridoxine Hydrochloride)	1.5 mg.
Pantothenic Acid (As the sodium salt)	5 mg.
Nicotinamide	25 mg.
Vitamin C (Ascorbic Acid)	75 mg.

Supplied in bottles of 25, 50, 100 and 250.

PARKE, DAVIS & COMPANY

MEDICAMENTA VERA · PD CO.

LETTER FROM THE EDITOR

Dear Reader:

No one expects to have a lawsuit on his hands. But at any time a disgruntled patient may take his grievance, imagined or real, to the courts. Should this patient be one of yours, how much better you would feel if you could be sure that you had not invited the suit by any little indiscretions of word or deed.

On pages 100 and 101, Dr. Louis J. Regan, who is also an attorney and legal counsel for the Los Angeles Medical Association, shows by picture and text how you may inadvertently be asking for trouble. The "Special Exhibit" is a part of a presentation arranged by Dr. Regan for the Los Angeles Association. By heeding the warnings you may keep out of the courts.

In every issue of MODERN MEDICINE you will find a report of legal rulings affecting the practice of medicine. This appears in "Forensic Medicine" (see page 28), a regular editorial feature prepared by Arthur L. H. Street, LL.B. The department is one of the few places in which you can find authoritative and intelligible comment on medicolegal problems.

Mr. Street, an eminently successful attorney and a most scholarly gentleman, has an enviable way of getting to the heart of things. He has developed the Problem-Answer format to the ultimate in conveying specific information.

He has an instinct for succinct statement and a rare ability for interpreting decisions of the court in straightforward, unlegalistic language. Even those of us who are not initiated in the intricacies of legal rhetoric can follow the logic and sense of Mr. Street's reports.

So it is no surprise to us, and will not be to you, to learn that in every one of our surveys MODERN MEDICINE readers have rated Mr. Street's department near the top in both interest and value.

Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Relief of Hiccup

TO THE EDITORS: Recently a refractory case of hiccup was reported in your correspondence section (Sept. 1, 1949, p. 23). "Everything" had been tried for this particular patient, until finally an intravenous injection of calcium gluconate brought immediate relief.

I wonder if the author had tried an intravenous injection of Coramine. Personally, I have found this to be the most reliable way to stop a stubborn attack of singultus. It is based on the rationale that strong respiratory stimulation, such as results from an intravenous (not intramuscular) injection of 2 to 5 cc. of Coramine, suppresses the irregular clonic spasms of the diaphragm. The action of CO_2 is based on the same mechanism.

I have yet to encounter a case of hiccup not helped by the above medication at least temporarily. Of course, in serious organic disease, results are apt to be temporary and there is recurrence after the Coramine effect wears off.

I believe that such a simple innocuous measure should be tried in all cases before procedures like phrenic section and so forth are given consideration.

FELIX SCHELL, M.D.

New York City

Case of Bloating

TO THE EDITORS: I wonder if your readers could help me prescribe for the following patient:

A forty-year-old, unmarried woman, underweight and having a megacolon, will deflate and apparently become normal on bed rest. When at work again, she blows up like a six-month pregnancy. She is not the hysterical type.

This condition has lasted four years. While hospitalized, she was given an oil emulsion and Donnatal and, because her distention disappeared, it was concluded that the treatment did the job. Very recently she was in bed two weeks with influenza, bronchitis, and pleurisy and became perfectly normal without any medication.

PAUL LOWELL, M.D.

Holden, Mo.

¶ *Modern Medicine* will forward to Dr. Lowell any suggestions submitted by our readers.—Ed.

Problems of the GP

TO THE EDITORS: This is just a note to say that I appreciate receiving your magazine and feel that it is very worth while to go through it regularly.

General practice is about the most difficult branch of medicine these days, when there are so many ad-

*Lyophilization Plus Separation
for Stability of Potencies

vances in every specialty which we must try to follow—new office treatments, simpler and surer therapies, as well as the many complicated therapies of the specialist.

With increased press coverage of medical affairs, patients are coming earlier to the doctor with the idea that, these days, there should be help for them. Organic disease is, therefore, seen at an earlier stage than it was a few years ago. The general practitioner must be ready with knowledge in any field, so that he can either treat the patient himself or be able to advise him where to get what is needed.

The practitioner must do some reading in general and special magazines, he requires new books periodically, and he must have a selection of lay magazines which carry the medical news that his patients are reading. The layman used to clip an article from a paper and ask the druggist for the patent advertised, but now, more often, the patient brings the clipping to his doctor and expects him to know about it.

I think this is all good except that it makes general practice more difficult than it was. Condensing of information is essential, with frequent step-by-step descriptions of the office and sick room technics that are necessary with new diagnostic and therapeutic modalities.

I don't believe advertising hurts a medical magazine if it does not affect the magazine's contributors and editing. The doctor should be able to choose good from bad, just as he does in the samples he receives and the great volume of advertising literature always in his mail. If the magazine has become affected by its advertising so that the contents lose in value, the magazine is soon read less and is

replaced in limited reading time by a better source of information.

As I started to say above, I appreciate receiving *Modern Medicine* and read it regularly.

TYRE K. JONES, M.D.
Marshall, Mich.

¶Thank you, Dr. Jones.—Ed.

Japanese Physicians Learn from MM

TO THE EDITORS: Part of my duties as a member of the Department of Pediatrics of the Atomic Bomb Casualty Commission is the instruction of Japanese physicians. I would appreciate it if you would send me any available reprints to aid in this undertaking.

ROBERT F. POOLE, JR., M.D.
San Francisco

Inquiry Well Answered

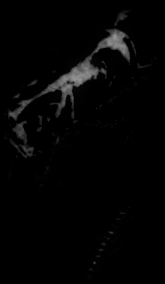
TO THE EDITORS: Thank you for the prompt and solicitous reply which I received recently to my inquiry on copper dust inhalation. I have enjoyed your magazine for years and many times have found answers to problems which occur in my practice. I always look forward with interest to the special articles.

EUGENE F. KALMAN, M.D.
Bridgeport, Conn.

Eight-Year Fever Case

TO THE EDITORS: The woman with an eight-year fever *(Modern Medicine,* Nov. 15, 1949, p. 46) surely has some disturbance in metabolism. I might merely suggest a test for adrenal dysfunction. This condition sometimes causes obscure high temperature. The case looks to me, since other causes are ruled out, like undulant fever.

S. S. JACQUELIN, M.D.
Hollywood, Calif.



keep cough within bounds with

DIATUSSIN

When cough is dry, hacking, unproductive, spasmodic or violent, it does no good, and only harasses the patient, disturbs his rest, delays recovery and lowers morale. Such coughing can be kept within reasonable bounds, safely and effectively, with the aid of DIATUSSIN, the non-narcotic antitussive.

By its dual action, local and central, DIATUSSIN reduces irritation of respiratory tract mucosa, liquefies mucoid secretions and raises the cough center threshold to excessive stimuli. DIATUSSIN thus lessens the frequency of cough, enhances its efficiency and transforms it from the irritating dry type to the easier productive type. It does not suppress cough, as narcotics may do, but keeps it under control, and makes it useful rather than harmful.

Administration: Orally, for children 2 to 5 drops, or 1 to 2 fluidrams of syrup, repeated as indicated; for adults 7 drops, or 1 tablespoonful of syrup.

Supply: DIATUSSIN Syrup—Each fl. dr. (3.7 cc. teaspoonful) contains 2 drops of the extract—Bottles 4 fl. oz., 1 pt.
DIATUSSIN—Vial, 6 cc.

Bischoff ERNST BISCHOFF COMPANY, INC. · STAMFORD, CONN.

Deplores 'Short' Treatment

TO THE EDITORS: As a physician and also a member of Alcoholics Anonymous, may I plead with all physicians treating alcoholics to refrain from the practice of placing their alcoholic patients on the barbiturates for "hangovers."

I am quite sure that the number of alcoholics who have abandoned the "bottle for the pill" is a ghastly example of our wanting to treat a disagreeable patient in the shortest, but certainly not the most efficacious manner. I contend that no alcoholic should ever be given a barbiturate unless hospitalized and under competent supervision. Alcoholics are not normal people and do not respond to sedation as do the rank and file of patients. It is quite easy for them to become habituated to barbiturates while being treated in, what to them, seems a logical manner.

If you are kind enough to publish this, please omit my name.

M.D.

Nebraska

Kept in Bookcase

TO THE EDITORS: I enjoy reading *Modern Medicine* and derive much benefit from it. *Modern Medicine* is always kept in my bookcase.

HARRY E. SUTELAN, M.D.

Norfolk, Va.

Vi terra

12 minerals and 9 vitamins all in 1 capsule

BALANCE

The Vi terra formula provides a balanced intake of vitamins, minerals and trace elements. It is designed to enhance the nutritional benefits of each of its ingredients. The components of Vi terra are so proportioned as to insure the harmonious interrelationship that is essential for the proper functioning of the vital enzyme systems.

EFFECTIVENESS

The Vi terra formula is based on the research of hundreds of authorities on nutrition. It contains all of the vitamins known to be essential for human nutrition and the 12 minerals most commonly deficient in food.

CONVENIENCE

With Vi terra, it is possible, for the first time, to secure adequate supplementary intake of vitamins, minerals and trace elements in a single capsule.

AT A PRICE EVERY PATIENT CAN AFFORD

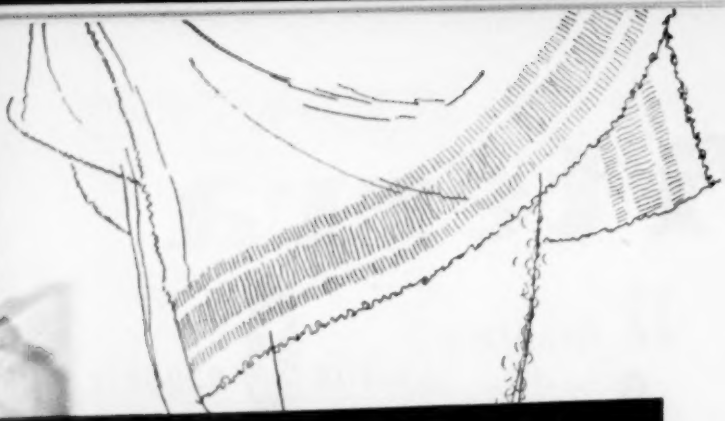
Study the formula

MINERALS		VITAMINS	
Cobalt (Cobaltous Sulf. $7H_2O$)	0.1 mg.	Vitamin A (Refined Fish Liver Oil)	5,000 USP Units
Copper (Cupric Sulfate)	1 mg.	Vitamin D (Irradiated Ergosterol)	500 USP Units
Boron (Sodium Metaborate)	0.2 mg.	Vitamin B_1 (Thiamine Hydrochloride)	3 mg.
Iron (Ferrous Sulfate)	10 mg.	Vitamin B_2 (Riboflavin)	3 mg.
Iodine (Potassium Iodide)	0.15 mg.	Vitamin B_6 (Pyridoxine Hydrochloride)	0.5 mg.
Calcium (DiCalcium Phosphate)	213 mg.	Niacinamide	25 mg.
Manganese (Manganous Sulf.)	1 mg.	Vitamin C (Ascorbic Acid)	50 mg.
Magnesium (Magnesium Sulf.)	6 mg.	Calcium Pantothenate (Dextro)	5 mg.
Molybdenum (Sodium Molybdate)	0.2 mg.	Mixed Tocopherols Type IV	5 mg.
Phosphorus (DiCalcium Phosphate)	165 mg.		
Potassium (Potassium Sulf.)	5 mg.		
Zinc (Zinc Sulfate)	1.2 mg.		

DOSAGE. Due to the catalytic-synergistic action of certain minerals with vitamins in vivo, it is suggested that one **Vi terra** capsule a day will serve adequately for supplementary nutrition. For quicker results three or more **Vi terra** capsules daily may be prescribed.

Vi terra is supplied in bottles of 100 capsules

J. B. ROERIG & COMPANY • 536 N. Lake Shore Drive • Chicago 11, Ill.



SYNDROX

(Brand of Methamphetamine Hydrochloride)

ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION

McNEI

In obesity, where control of appetite is desired . . . .

In mild depression . . . . narcolepsy . . . .

. . . . and as adjunctive treatment in acute and chronic alcoholism, postencephalitic parkinsonism . . . .

The action of Syndrox Hydrochloride—a sympathomimetic amine—is similar to that of amphetamine and ephedrine—a stimulating effect on the high cerebral centers.

SYNDROX* HYDROCHLORIDE

. . . . elevates the mood (produces euphoria)

. . . . imparts a sense of increased energy and efficiency

. . . . counteracts sleepiness and feeling of fatigue . . . . suppresses appetite

ADVANTAGES OF SYNDROX:

Rapid onset (10-20 minutes)
Long duration of effect (6-12 hours, depending on dose)
Negligible side effects, with proper dosage
Small dosage

Suggested initial dose: 2.5 to 5 mg. daily; dosage may be increased to 2.5 to 5 mg. two to three times daily and maintained at this level as long as there are no untoward effects.

Supplied in 5 mg. tablets (scored, green), bottles of 100 and 1000. Also available in a pleasant-tasting elixir (colored amber); each 30 cc. (1 fl. oz.) containing 20 mg.—pints and gallons. Samples on request.

ABORATORIES, INC. PHILADELPHIA 32, PENNSYLVANIA

*Trademark of Smith Laboratories, Inc.

Forensic Medicine

COMPILED BY ARTHUR L. H. STREET, LL.B.

PROBLEM: A doctor prescribed narcotic drugs for addicts without proper medical basis, solely to satisfy the addiction. Did that constitute such "fraud and deceit" in the practice of medicine as to justify suspension of his license, under the New York statutes?

COURT'S ANSWER: Yes.

The New York Board suspended the doctor's license, but the Appellate Division of the Supreme Court of that state set the suspension aside (85 N.Y.S. 2d 140, 274, App. Div. 354). On the Board's appeal to the New York Court of Appeals—the state's highest court—the Board's order was upheld (87 N. E. 2d 517).

The Court of Appeals said that issuing a prescription for narcotic drugs to an addict without proper medical basis clearly tends to deceive those concerned in enforcing narcotic drug laws. "Such a prescription is more than a mere direction to the pharmacist. It plays an integral part in the system of control and, if not a true prescription, may throw that system awry."

The doctor's previous unblemished record, his generous contributions to public service, and his excellent reputation could not outweigh clear proof that he knew the nature of his unlawful acts. But the Board, in its exclusive discretion, could consider those facts in determining what discipline should be administered.

The Court of Appeals noted that the courts could not review or disturb the Board's finding that the doctor had issued the prescriptions without medical basis and to satisfy addiction, there being ample evidence to support the finding.

PROBLEM: An Arkansas statute gave a medical practitioner, nurse, and hospital a lien for the value of services rendered to relieve a patient from injury negligently caused by a third person—"on any claim, right of action, and money to which the patient is entitled because of that injury, and to costs and attorneys' fees incurred in enforcing that lien." An injured employee of a lumber company sued the company for $85,000 but dismissed the suit on being paid $4,000 in compromise settlement. Did the doctor who treated the injuries at his private hospital and a registered nurse who attended the injured man have a lien enforceable against the company, it having been notified of the lien claim as provided by the statute?

COURT'S ANSWER: Yes.

Said the Arkansas Supreme Court: "It may be that [the injured employee] was not legally entitled to the $4,000 paid him, but the lumber company cannot be heard to say that he was not because it voluntarily paid it to him in compromise of a claim of $85,000," and the doctor and the nurse "cannot be compelled to litigate that question. The remedial object of the

(Continued on page 32)

*Trademark of Merrell Laboratories, Inc.

for faster clinical response

in TINEA CAPITIS . . .

TINEA CRURIS . . . TINEA CORPORIS . . .

TINEA PEDIS . . . (athlete's foot)

get AT the fungus with

LIQUID

a solution of copper undecylenate with undecylenic acid, and dioctyl sodium sulfo-succinate in isopropyl alcohol and tetrachloroethylene (Pat. App. For).

The new, more fungicidal copper salt of undecylenic acid in a new, fat-solvent, low surface-tension, volatile-liquid base.*

SIMPLE TO USE—Just paint on twice a day . . . no bandages or dressings necessary. Supplied in 1 oz. bottles with applicator brush, and 4 oz. bulk bottles.

*Also available in cream form, DECUPRYL CREAM, in 1 oz. and 1 lb. jars, and as powder, DECUPRYL POWDER, in 2 oz. cans.

Send for sample and make this test. Place drop of water on skin . . . then a drop of DECUPRYL Liquid. Note the difference. DECUPRYL spreads immediately . . . penetrates into tiniest cracks and crevices.

Crookes

CROOKES LABORATORIES, INC.
305 East 45th St., N. Y. 17, N. Y.

Please send me literature on DECUPRYL and a sample of
DECUPRYL Liquid ☐ DECUPRYL Cream ☐ and
DECUPRYL Powder ☐

M.M.

Dr._____

Address_____

_____

A Demonstrably Superior Iodine!

CLINICAL COMPARISON

Inorganic Iodine—LUGOL'S SOLUTION

NUMBER OF SUBJECTS	DOSE, t.i.d.	DOSAGE DAYS	SUBJECTS AFFECTED	SYMPTOMS
4	0.09 cc.	13	3	Nausea
			3	Vomiting
			2	Diarrhea
4	0.36 cc	13	1	Abdominal cramps
			1	Nasal catarrh
4	0.54 cc.	6	3	Nausea
			2	Diarrhea
			1	Slight skin rash
5	0.72 cc.	6.5	3	Diarrhea
			1	Nasal catarrh

SUMMARY

Total number of Subjects 17

Number of Instances in which Untoward Symptoms Were Reported 20

NOTE: Perspiration, nervousness, impaired or improved appetite, frequency of urination, polydipsia, and diuresis were also considered, but nothing notable was observed. The subjects re-

Goodman and Gilman (The Pharmacological Basis of Therapeutics, 1945) point out that the salts of iodine are "of particular value in *actinomycosis, syphilis* and *hyperthyroidism*, for the *prophylaxis of goiter*, and as an *expectorant*."

But clinical experience has shown that ordinary dosage forms of iodine are not entirely acceptable because of instability and various undesirable side effects.

Organidin (Wampole) provides a unique, thoroughly reliable, stable preparation of iodine organically combined by reaction with glycerin for internal administration. *Organidin* contains no free iodine or inorganic iodides, which may irritate the digestive tract, and gives a negative reaction to starch test solution. Exceptionally well tolerated, even during

ORGANIDIN®

Oral Iodine Tolerance Tested on 35 Human Subjects, at Corresponding Iodine Levels

Organic Iodine—ORGANIDIN (Wampole)

SYMPTOMS	SUBJECTS AFFECTED	DOSAGE DAYS	DOSE, t.i.d.	NUMBER OF SUBJECTS
Slight nocturnal palpitation	1	30	1.5 cc.	6
Slight skin rash	1			
none	none	30	2.1 cc.	3
none	none	30	2.7 cc.	5
none	none	30	3.6 cc.	4

ceived doses of *Lugol's Solution* and of *Organidin* diluted in a third of a glass of water, approximately 30 minutes after meals. —*Slaughter, D.: S. Dakota J. Med. & Pharm., 1:425, 1948.*

SUMMARY

Total number of Subjects	18
Number of Instances in which Untoward Symptoms Were Reported	2

prolonged dosage, *Organidin* is rapidly absorbed for optimal therapeutic effect.

Organidin is standardized to contain 2.5 Gm. of iodine per 100 cc. One minim of *Organidin* represents 1.5 mg. of iodine, corresponding to 15 times the minimal daily requirement, or 7.5 times the optimal daily requirement of Curtis and Fertman. (J.A.M.A., 121:423, 1943.) Supplied in bottles of 30 cc. with dropper designed to deliver approximately 1 minim per drop. *Samples and literature on request.*

HENRY K. WAMPOLE & CO., INCORPORATED

Manufacturing Pharmacists Since 1872

PHILADELPHIA 23, PENNSYLVANIA

statute was to prevent the very thing that occurred in this case. It was enacted for the very humane purpose of encouraging physicians, hospitals and nurses to extend their services and facilities to indigent persons who suffer personal injuries through the negligence of another, by providing the best security available to assure compensation for services and facilities. . . . There is no burden placed on industry, nor does it tend to discourage settlements." The alleged wrongdoer is left free to defend the personal injury claim in the courts. If the court exonerates him from liability, the lien claimant gets nothing. If the claim is compromised, as in this case, the defendant has a choice between paying the lien claim or getting a written release of the lien (124 S. W. 2d 813, 1939).

Under a similar statute enacted in New Jersey in 1934, it was decided that there was no lien in favor of a doctor who rendered services to an injured person before the statute took effect (7 Atl. 2d 291).

PROBLEM: Under the Workmen's Compensation Act of Colorado, which is worded similarly to statutes in many other states, was the reasonable cost of surgery and hospitalization of an injured worker a proper charge against the employer, when a competent physician believed that the injury required such services, although it afterward appeared that the services were necessary to relieve a preexisting diseased condition?

COURT'S ANSWER: Yes.

In this case, the Colorado Supreme Court restated the rule, now recognized by most courts throughout the country, that aggravation of a preexisting abnormal or diseased condition may support a compensation award (210 Pac. 2d 448).

Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: Why does heart disease cause variations of electric potentials, and does this bring about abnormal configurations of electrocardiograms?

M.D., Massachusetts

ANSWER: *By Consultant in Cardiology.* The abnormal configuration of the electrocardiogram in heart disease is due to alterations in the origin and, more important, in the spread of the activation process throughout the heart chambers. This will alter the pattern of the depolarization process recorded by the QRS and the process of repolarization recorded by the S-T and T complexes. Furthermore, as a result of disease, injury currents will further modify the electrocardiographic contour.

QUESTION: For the usual gonorrheal infection in the female, how many injections of procaine penicillin, 96-hour type, should the patient receive to produce a negative vaginal smear? How soon after treatment is complete should the vaginal smear be negative? How soon after treating a male for gonorrhea with the procaine penicillin should the smear be negative?

M.D., Virginia

ANSWER: *By Consultant in Gynecology.* A single dose of 400,000 units of fortified procaine penicillin, intramuscularly, is curative in about 95% of gonorrhea cases of the ordinary acute variety. This dose should produce relief of urethritis within two or three hours, and a negative smear within twenty-four. Acute gonorrheal cervicitis in the female may be more resistant. Penicillin, as above, should be repeated for four days, followed by culture and smear within twenty-four hours after the last dose. Follow-up studies should be made postmenstrually for three months before cure is pronounced.

QUESTION: [1] Are the xanthine drugs such as aminophylline and theobromine indicated in essential hypertension or in chronic nephritis? [2] Are these drugs indicated in congestive heart failure of any type, regardless of blood pressure? Are there any contraindications for the use of xanthine drugs in medicine? [3] Are digitalis, xanthine drugs, and aconite therapeutically incompatible or are they synergistically therapeutic in nature?

M.D., Massachusetts

ANSWER: *By Consultant in Internal Medicine.* [1] The xanthine drugs do not reduce blood pressure by direct action. They are frequently used together with sedatives in the treatment of hypertension. The drugs are generally ineffective in chronic nephritis unless edema is present. With this condition, the dosage has to be carefully adjusted because of the pos-

[illegible]

ANSWER: By Consultant in Radiology. Calcification of the costal cartilages in young patients is a common finding and apparently without clinical significance. No evidence has been adduced to indicate correlation between it and metabolic disturbances. On the other hand, the blood calcium as given in these figures is definitely lower, and the phosphatase definitely higher than normal. This indicates abnormality in

(Continued on page 40)

Ortho-E Injectable

For the Control of
Muscle Spasm
in Rheumatoid Disorders

Has these Advantages

Marked Relief from Muscle Spasm Pain

Facilitates Nerve Impulse Transmission

Reduces Severity of Muscular Deformities

Each cc. Contains:	
Physostigmine Alkaloid	0.4 mg.
Atropine Alkaloid	0.5 mg.
Alpha Tocopherol Acetate	100.0 mg.
Benzyl Alcohol	2.0%
Sesame Oil	q. s.

Supplied: 10 cc. Vials

SAMPLES AND LITERATURE ON REQUEST

The Columbus Pharmacal Co.

sibility of toxic effect on the kidney. [2] The xanthine drugs are used in treatment of all types of congestive failure and supplement the action of digitalis and the mercurials. When used in conjunction with the mercurials for intramuscular injection, they materially increase the rapidity of absorption. [3] The xanthines are not therapeutically incompatible with digitalis but are useful adjuvants to its use. Aconite is of doubtful value in the treatment of heart disease and has not been used much in recent years.

QUESTION: I would appreciate an opinion concerning marked calcification of the costal cartilages in a twenty-year-old woman. The patient had a fracture in one of the costal cartilages after a blow and has had some pain in this area. She has no other complaints and the physical examination is negative except for very firm costal cartilages which are extremely calcified in roentgenograms. Roentgenograms of the ribs and right humerus reveal normal bone structure. Results of single laboratory examination are: calcium, 7.1 mg. per cent; phosphorus, 4.3 mg. per cent; and alkaline phosphatase, 35.7 (normal with the method used is 5-15). Vitamin D has not been used. Should careful calcium studies be made or may the condition be dismissed as benign?

M.D., Michigan

ANSWER: *By Consultant in Radiology.* Calcification of the costal cartilages in young patients is a common finding and apparently without clinical significance. No evidence has been adduced to indicate correlation between it and metabolic disturbances. On the other hand, the blood calcium as given in these figures is definitely lower, and the phosphatase definitely higher than normal. This indicates abnormality in

(Continued on page 40)

Artho-E Injectable

For the Control of
Muscle Spasm
in Rheumatoid Disorders

Has these Advantages

Marked Relief from Muscle Spasm Pain

Facilitates Nerve Impulse Transmission

Reduces Severity of Muscular Deformities

Each cc. Contains:	
Physostigmine Alkaloid	0.4 mg.
Atropine Alkaloid	0.5 mg.
Alpha Tocopherol Acetate	100.0 mg.
Benzyl Alcohol	2.0%
Sesame Oil	q. s.

Supplied: 10 cc. Vials

SAMPLES AND LITERATURE ON REQUEST

The Columbus Pharmacal Co.
Columbus 16, Ohio

Each CHOL-NINE "B" Capsule

CONTAINS

CHOLINE DIHYDROGEN CITRATE.....(5 grs.) 320 mg.
Reverses Fatty Infiltration of the Liver

dl METHIONINE.....(2 grs.) 125 mg.
Prevents Further Hepatic Cell Destruction

ESSENTIAL "B" VITAMINS

THIAMIN HYDROCHLORIDE	2.5 mg.
RIBOFLAVIN	2.5 mg.
NIACINAMIDE	25.0 mg.

Invaluable in Pellagra, Chronic Alcoholism, Diabetes, and other Liver damage conditions.

The 3 Most Widely Used Therapeutic Agents

For the treatment of Impaired Liver Function

Cirrhosis	Jaundice	Diabetes
Fatty Infiltration	Infectious Diseases	Ascites
Infectious Hepatitis	Hepatic Enlargement	Necrosis
Functional Impairment	Toxemias of Pregnancy	Chronic Alcoholism

CHOL-NINE "B" supplies in a single dosage form for the convenience of the physician and the patient, these three most effective principles for the prevention and abnormal accumulation and deposition of fat in the liver and other organs of the body. However, because early diagnosis is of prime importance, it is suggested that Chol-Nine "B" be prescribed in all border-line hepatic cases involving abnormal or faulty fat metabolism; for example, a high percentage of cirrhosis patients show histories of chronic alcoholism. Diabetes, according to Biskind reveal various stages of liver impairment.

Samples and Literature on request. **Supplied—Bottles of 100, 500, 1,000.**

The Columbus Pharmacal Co. COLUMBUS 15, OHIO.

PREFERRED..

because

TRISULFAZINE* (sulfadiazine-sulfamerazine-sulfamethazine mixture) contains a combination of three sulfas which provides clinical effectiveness with increased safety.[1]

- Reduced danger of crystalluria makes intensive dosage feasible with minimal hazard
- Lessened risk of concrement formation reduces the need for adjuvant alkali or fluid administration
- Rapid absorption and prolonged action make less frequent dosage possible in many cases

prescribe

TRISULFAZINE

TABLETS and PALATABS*

The *FIRST* triple-sulfa combination accepted by the Council on Pharmacy and Chemistry.

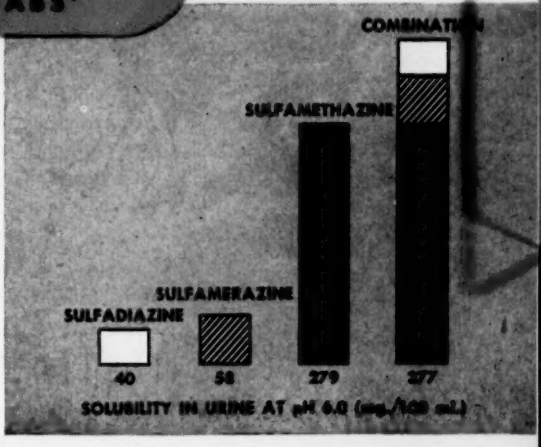
providing: SULFADIAZINE • SULFAMERAZINE • SULFAMETHAZINE

TRISULFAZINE Tablets: 0.166 Gm. (2½ gr.) each sulfonamide. For older children and adults.

TRISULFAZINE *Palatabs* (Half Strength): 0.083 Gm. (1¼ gr.) each sulfonamide. Peppermint flavored—agreeable to infants and younger children.

SUPPLIED: Bottles of 100, 500, and 1,000.

Also available in suspension form.



1. Flippin, H. F., and Boger, W. P., Virginia M. Monthly 76: 56 (1949).

*Trademark of The Central Pharmacal Co.

THE CENTRAL PHARMACAL CO. • SEYMOUR • INDIANA

Products Born of Continuous Research

AGAIN CONFIRMED..

breakfast guards against hazardous late morning slump

A second extensive study recently completed at a prominent medical college supports the previous findings* that the habit of eating breakfast guards against physical and mental slump during the pre-noon hour, always a hazard to work performance and safety. For this reason, if for no other, the daily eating of breakfast constitutes a wise living habit.

THE SEQUELAE OF BREAKFAST SKIPPING

These studies again objectively show how the physical stamina and mental reactivity are lessened in the late morning by the unsound practice of skipping breakfast or taking just a cup of coffee. In the majority of

*Reprint of the research study and findings will be sent on request.

subjects, this regretable practice significantly lowered maximum work output and dulled mental acuity during the 10:30 to noon period; in all subjects it *increased* neuromuscular tremor during this time.

These impairments of optimal physiologic functioning may well change a potentially happy and successful morning to one of distress and failure, or even jeopardize well-being and safety in the stress and hazards of our modern high-speed mechanized living. The detrimental influences of skipping or skimping breakfast can affect adversely not only adults engaged in professional and industrial pursuits, but also school children of all ages and housewives.

WHAT CONSTITUTES A NUTRITIOUS BREAKFAST?

According to nutrition and health authorities a widely recognized breakfast pattern of fruit or fruit juice, cereal, milk, bread and butter is the basis of a good, nutritious breakfast. The cereal serving—breakfast cereal and milk—is an important component of this basic breakfast. It contributes biologically complete protein; the B vitamins thiamine, riboflavin and niacin; the important minerals calcium, phosphorus and iron; and needed food energy. It is bland and easily digested. Its many varieties of form, consistency and taste prevent monotony. Marked economy is also a notable feature of the cereal serving.

The presence of this seal indicates that all nutritional statements herein have been found acceptable by the Council on Foods and Nutrition of the American Medical Association.

CEREAL INSTITUTE, INC.

135 South La Salle Street • Chicago 3

A RESEARCH AND EDUCATIONAL ENDEAVOR DEVOTED TO THE BETTERMENT OF NATIONAL NUTRITION

the calcium metabolism and should be investigated, provided the chemical findings are reliable. I would suggest rechecking the blood calcium and calcium phosphatase to make certain that the apparent abnormalities are not technical errors. If the figures persist, further studies of calcium metabolism should be made, since the situation suggests something akin to osteomalacia. I do not believe, however, that it has anything to do with the calcification of the costal cartilages.

QUESTION: What is the treatment for severe varicose veins during pregnancy? Veins began to enlarge at three months; the patient is now in her seventh month.

M.D., Alabama

ANSWER: *By Consultant in Obstetrics.* Varicose veins during pregnancy are best treated conservatively, since spontaneous improvement so frequently follows delivery. Treatment consists of wearing an elastic stocking, elastic bandage, or about five pairs of stockings one over the other for pressure. Bed rest may be necessary. Vulvar varicosities are treated by bed rest and application of uniform pressure by means of an athletic supporter worn over a vulvar pad.

QUESTION: Can schizophrenia be successfully treated with steroids?

M.D., New York

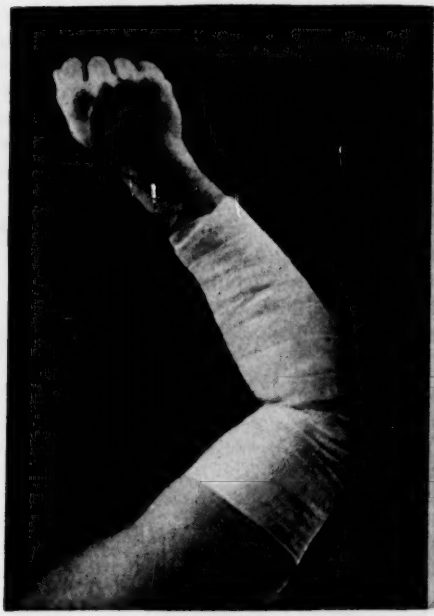
ANSWER: *By Consultant in Neurology.* Very little specific information is available on the effect of the steroids in the treatment of schizophrenia. No published articles on the beneficial action of any drug or medication in schizophrenia have been convincing.

There is an important difference in Elastic Bandages!

TENSOR*

ELASTIC BANDAGE

is woven with *Live Rubber Thread!*



And *what* a difference that makes! Since TENSOR is woven with *live rubber thread*, it offers you these unequaled advantages over rubberless bandages.

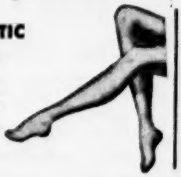
TENSOR:

- exerts uniform, controlled pressure without binding.
- has constant elasticity—you don't find it in rubberless bandages!
- *stays put*—needs no frequent readjustments—is comfortable to wear.
- is inconspicuous—women patients will wear it.
- can be laundered repeatedly without loss of elasticity.

Ideal For Every Elastic Bandage Use!

For your patients' support and comfort, prescribe Bauer & Black Elastic Supports

BAUER & BLACK ELASTIC STOCKINGS . . . 2-way stretch, easy to fit. Women appreciate their neutral and inconspicuous color.



BAUER & BLACK SUSPENSORIES . . . as a palliative and for treatment of diseases of the scrotum.

*Reg. U. S. Pat. Off.

Products of

BAUER & BLACK

Division of The Kendall Company, 2500 S. Dearborn St., Chicago 16

FIRST IN *ELASTIC* SUPPORTS

Washington Letter

Congress Loosens Purse Strings for Cancer Investigations

Almost lost in Washington's whirl of dollars and politics is the remarkable story of the government-financed campaign against cancer.

Congress has a long record of saving pennies on research at a cost of dollars and lives. The comfortable budget of the National Cancer Institute is evidence that on cancer, at least, Congress can no longer be criticized. For the fiscal year, the Institute has at its disposal just under $25,000,000. This comes close to equaling all the money raised over the country by the scores of private cancer agencies, and is enough to insure that no promising avenue of research will be neglected for lack of money.

When the Institute was created twelve years ago, Congress risked $700,000 on the project. Since then, the progress in appropriations has been upward, but, until last year, at a painfully slow rate. Just a few years ago the most ardent sponsors never even hoped for an appropriation approaching $25,000,000.

The great need now is for trained personnel to carry on the program—physicians, technicians, and investigators. The Institute still is in the "growing stage"—that is, training workers and underwriting projects. The country can't expect spectacular results from this year's appropriation, because so much of it has to go into building for the future. For example, around one-fourth of the sum will be paid to contractors—for erecting hospitals, laboratories, and

"My symptoms are . . ."

Safe, Effective Calorie Control in

REDUCING DIETS

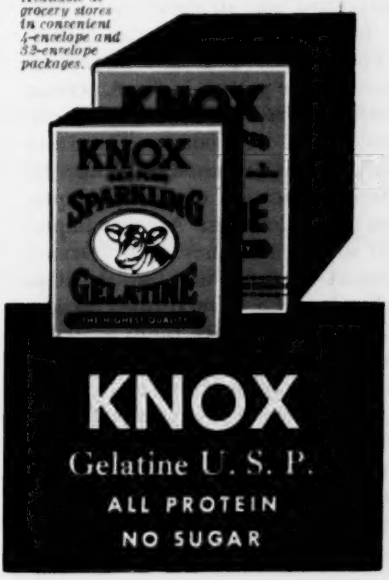
MANY so-called reducing diets are deficient in protein. Such diets, of course, may cause damage to essential body tissues.

As a dietary adjunct in reduction of obesity caused by overeating, Knox Unflavored Gelatine, a recognized supplementary protein, has been found by many physicians to be an effective safeguard against protein starvation, in reducing diets.

Knox Gelatine is used as an ingredient in salads, main dishes and desserts that are high in residue, low in calories and extremely appetizing and nourishing. Knox is also widely recommended in between-meal drinks, dissolved in water or diluted fruit juices, to provide protein without extra calories.

Knox Gelatine is all protein, with no sugar content—unlike factory-flavored gelatin powders with their high acid and sugar content. It provides good protein with no extra calories. It is made to U.S.P. standards. Write Knox Gelatine, Dept. R-22 Johnstown, New York.

Available at grocery stores in convenient 4-envelope and 53-envelope packages.



FREE DIETARY GUIDE BOOK FOR OBESE PATIENTS

This is a 32-page booklet containing 56 low-calorie recipes and menus, scientific calorie and other food-value charts, and authoritative dietary suggestions. A supply of these booklets is available to you, free, on request.

buildings. As much or even more will be earmarked for training of personnel.

The first construction grant was made in October 1947, to replace the Jackson Memorial Laboratory at Bar Harbor, Me., destroyed in a spectacular forest fire. Since then 56 additional grants have been announced, totaling almost $16,000,000. In contrast, only $8,500,000 has been granted for research because of the lack of places to work.

Supported by federal appropriations, the Institute has developed into an effective national clearinghouse for information on cancer research and control. Private organizations—whose contributions to research are substantial—are not required to cooperate with the Institute, but almost without exception connections are friendly and mutually beneficial. The Institute gathers and circulates information, grants funds to private organizations, and in some cases shares in the money other agencies collect.

The biggest and best known of these private groups is the American Cancer Society, which annually collects around $15,000,000. The Institute's Research Council helps ACS decide on allocation of funds for projects and fellowships. Another important source of money is the Damon Runyon Cancer Fund, which helps to finance ACS. Several other national organizations have funds available for research, and 8 or 10 are directly engaged in cancer research.

A few years ago some government officials looked with suspicion on the fund-raising of these private organizations. Now, however, they've revised their ideas. Interest aroused by private campaigns has a desirable effect on Congress. When considerable publicity is given to cancer, Congress is more likely to be generous. The result is more federal money, and more private money to supplement the federal grants. All concerned now are quite satisfied with the arrangement.

An important adjunct of this whole operation is the cancer program of the Atomic Energy Commission. The AEC has sent out, to this country and abroad, more than 2,500 shipments of radiophosphorus or radioiodine for tracer work in cancer research. The radioisotopes are used mainly for investigation of cancer in animals, for determination of the basic metabolism of cancer cells, for help in the diagnosis and treatment of cancer, and for study of radiation as a cause of cancer. At present the AEC is interested in determining the relative values of radiocobalt and radium in cancer treatment.

Spokesmen for the Institute and Public Health Service repeatedly have told congressional committees that a cure for cancer will not result simply from appropriating money. Every likely possibility will be investigated with hope that something develops.

In an address before the New York Academy of Medicine, the surgeon General of the U.S. Public Health Service, Dr. Leonard Scheele, described in some detail a number of the projects and possibilities and then said:

> When viewed chronologically these isolated achievements elude interpretation. I believe, though, that the findings warrant the following generalizations:
>
> First, some tumors are functional with

(Continued on page 49)

Five-fold attack against

Middle Ear Disease **External Ear Disease**

1. **Antibacterial**—local infection effectively attacked by high concentration of sulfa-urea.[1,2]
2. **Debriding**—infection site rapidly cleansed—odors reduced, and waste material removed.
3. **Analgesic**—pain and itching relieved by chlorobutanol.
4. **Fungicidal**—inhibits common fungous contaminants.
5. **Hygroscopic**—absorbs excess moisture, acts as decongestant.

White's Otomide is a stable solution of 5% Sulfanilamide, 10% Carbamide (Urea) and 3% Anhydrous Chlorobutanol in glycerin of high hygroscopic activity. Supplied in dropper bottles of ½ fluid ounce (15 cc.)

White's **OTOMIDE**

Topical Otologic Chemotherapy

WHITE LABORATORIES, INC., Pharmaceutical Manufacturers, Newark 7, N. J.

1. Holder, H. G., and MacKay, E. M.: Mil. Surg. 90:509-518 (May) 1942.
2. Holder, H. G., and MacKay, E. M.: Surgery 13:677-682 (May) 1943.

now

peptomatic* digestional aid in single tablet form

By developing an entirely new type of enzymatic carrier, literally "a tablet within a tablet," Robins now makes available a triple-enzyme digestant—Entozyme. In *one small specially constructed tablet,* Entozyme "packs" pepsin, pancreatin and bile salts—in such a way that they are released only at the gastro-intestinal level of optimal activity. Thus Entozyme greatly simplifies and makes more effective the treatment of complex digestive disturbances of the gastro-intestinal tract. Clinical studies[1,2,3] have demonstrated the value of Entozyme in such conditions as chronic cholecystitis, chronic duodenal ulcer, acute and chronic pancreatitis and certain postoperative syndromes of the gastro-intestinal tract—in relieving nausea, belching, distention, anorexia, food tolerance, etc.

FORMULA: Each specially constructed tablet contains Pancreatin, U.S.P., 300 mg.; Pepsin, N.F., 250 mg.; Bile Salts, 150 mg.

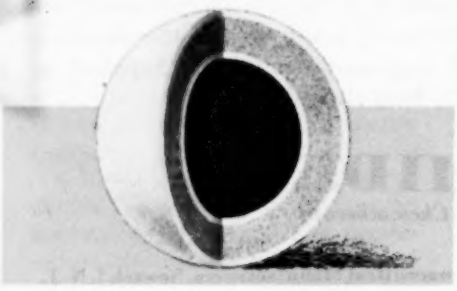
DOSAGE: One or two tablets after each meal, or as directed by physician, without crushing or chewing.

AVAILABLE: Bottles of 25 and 100.

REFERENCES:

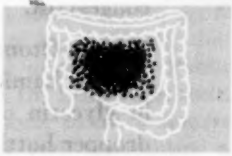
1. Kammandel, N. et al.: Awaiting publication.
2. McGavack, T. H. and Klotz, S. D.: Bull. Flower Fifth Ave. Hosp., 9:61, 1946.
3. Weissberg, J., McGavack, T. H. and Boyd, Linn J.: Am. J. Digest. Dis., 15:332, 1948.

A. H. ROBINS CO., INC. · **RICHMOND 20, VA.**
Ethical Pharmaceuticals of Merit since 1878



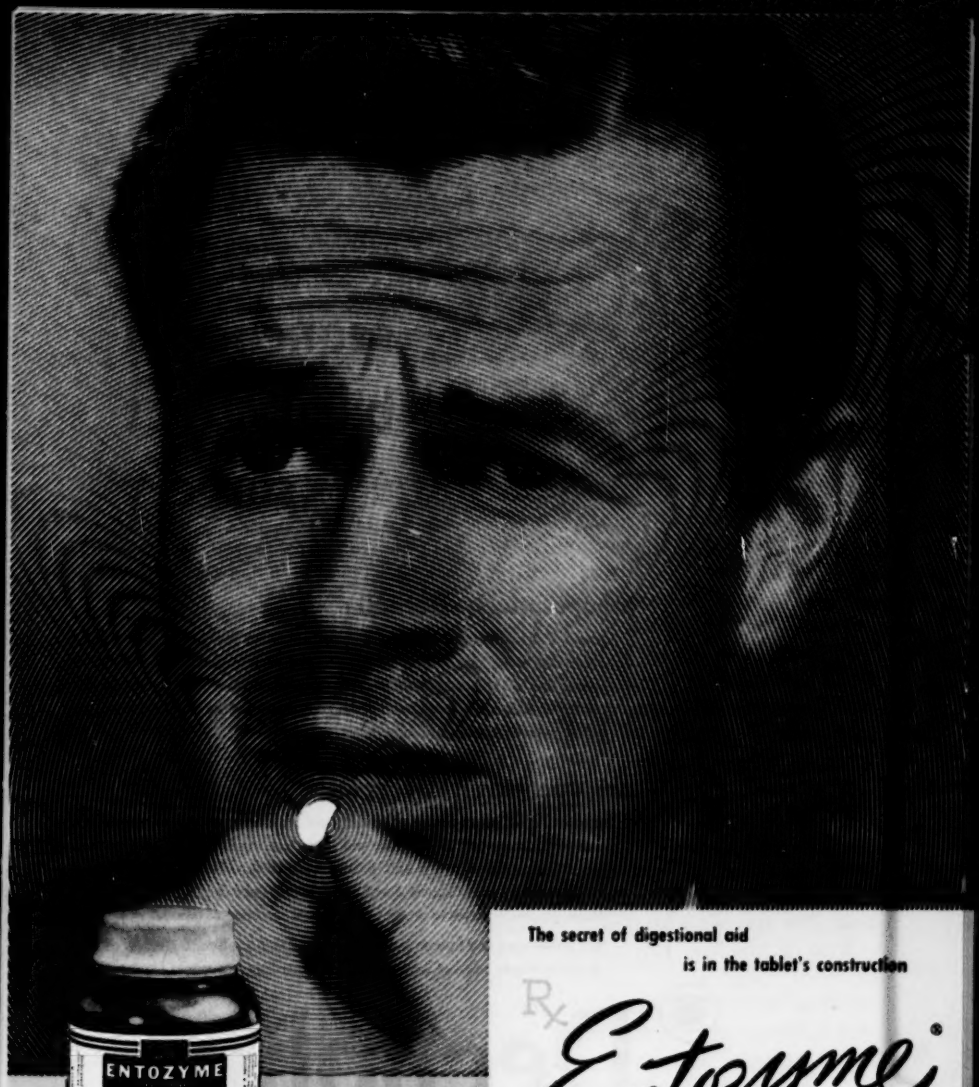
The "Peptomatic" Tablet

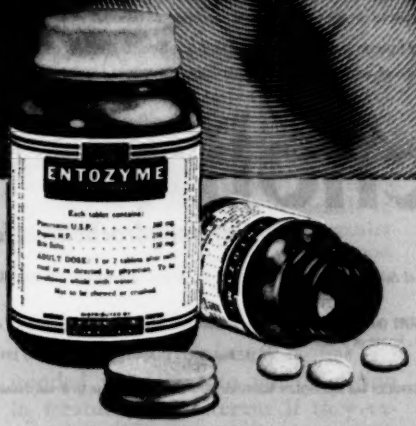
Releases pepsin in the stomach



Releases pancreatin and bile salts in the small intestine

The "Peptomatic" Tablet*—
a coined word to describe the unique mechanical action of Entozyme Tablet.



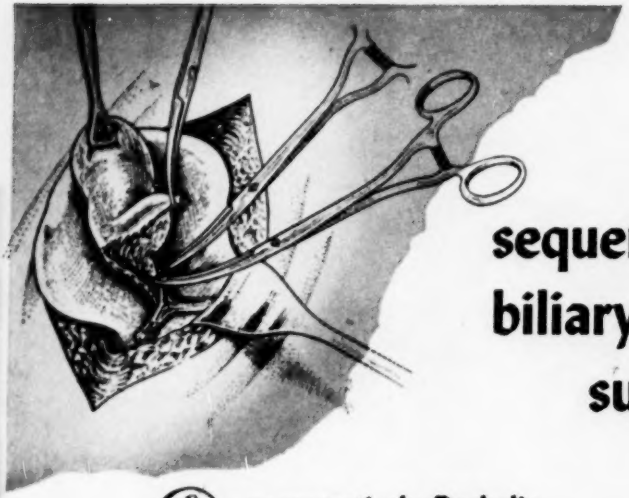


The secret of digestional aid
is in the tablet's construction

Rx

Entozyme®

A. H. Robins



sequence in biliary tract surgery

preoperatively-Decholin

brand of dehydrocholic acid stimulates an abundant flow of thin bile, helping to "clear the arena" for surgery by the removal of inspissated bile, mucus, small stones and other accumulations from the choledochus. This powerful hydrocholeretic action also produces functional distension of the gallbladder and ducts, aiding in identification and surgical procedure.

postoperatively-Decholin

provides an effective means of flushing out the biliary tract. Used together with antispasmodics such as atropine and nitroglycerin, *Decholin* helps to remove blood clots, residual debris and hidden, small calculi. This method, recently re-emphasized by Best,[1] is useful with or without T tube drainage. In reflex biliary stasis, *Decholin* serves to prompt an adequate secretion of bile.

For more rapid and intense hydrocholeresis, *Decholin Sodium*, brand of sodium dehydrocholate, is given intravenously, followed by a course of *Decholin* tablets.

Decholin

brand of dehydrocholic acid

Decholin (brand of dehydrocholic acid) Tablets of 3½ grains, in bottles of 25, 100, 500 and 1000.

Decholin Sodium (brand of sodium dehydrocholate) 20% solution, in ampuls of 3 cc., 5 cc. and 10 cc., boxes of 3 and 20.

1. Best, R. R.: Ann. Surg. 128: 348 (Sept.) 1948.

DECHOLIN and DECHOLIN SODIUM: Trademarks registered in U. S. and Canada.

AMES

AMES COMPANY, INC.
ELKHART, INDIANA

regard to hormonal production or response.

Second, tumors may be induced, prevented or controlled by hormonal manipulation.

Third, derangement of endocrine relations within the body may result in cancer.

Fourth, tissue growth normally supported by endocrinology in the etiology, diagnosis and treatment of cancer is plainly revealed.

However, he would permit himself just this much optimism:

The research attack upon cancer is launched on two main levels, the gaining of basic knowledge, with a long view toward practical application; and the search for improved methods of prevention, diagnosis and treatment in the absence of an adequate explanation of the cancer process. In facing the cancer problem, we are encouraged by the fact that in many diseases the cause was unknown at the time the fight was won.

Sanitation Methods Reviewed

An internationally famous sanitation expert, who toured the United States under auspices of World Health Organization, made a blunt report on what he had seen. J. C. Dawes of the English Ministry of Health declared:

The thing I find most difficult to understand is the great variation in methods—or lack of methods—in both the collection and disposal of domestic trash and garbage. Some municipalities have excellent systems. In others, this important sanitary service appears not to be regarded as a major public health responsibility. As a result the organization of the service is weak or even nonexistent.

VA Home-Town Treatment

Veterans Administration has reminded physicians to use discretion in treatment of veterans if they expect VA to pay the bill. VA is finding it necessary to turn down an increasing number of claims for treatment. Unless the case is an emergency, the veteran is required to obtain advance certification from VA. In an emergency, VA regional office must be notified in seventy-two hours if the patient is hospitalized and within fifteen days if the treatment is out-patient. If these requirements aren't met, VA refuses payment.

Fight over Military Medicine

Since early October, orders from Defense Secretary Louis Johnson have been tightening up and economizing military medical services. There has been undercover objection, but the first open break came from Dr. Paul B. Magnuson, head of Veterans Administration medical services.

Dr. Magnuson does not come under Johnson's authority; therefore he is not guilty of insubordination or service disunity.

Defense Department officials are convinced that the services treat too many nonmilitary personnel, mostly VA cases and military dependents, in military hospitals. Congress will have to act before this problem is permanently solved. Meanwhile, Johnson attempted to cut down on these extra costs by reminding the medical services that their first concern must be military personnel.

Dr. Magnuson, looking ahead, said that this was the first step in easing 5,500 VA cases out of military hospitals. Later, Dr. Magnuson said that he might have been unduly alarmed. But he allowed his warning to stand. Meanwhile, the unification-economy program has received strong endorse-

(Continued on page 52)

Greater Comfort FOR YOUR PATIENTS!

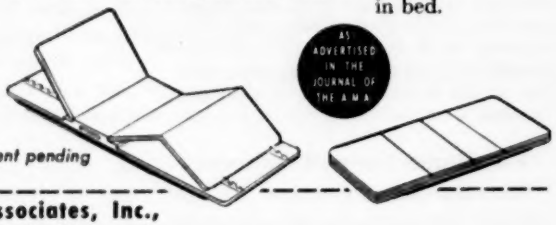
New MENGEL ADJUSTABED*

TILTABLE

A revolutionary new low cost aid to health and comfort, the Mengel Adjustabed*, placed between any ordinary springs and mattress—permits 13 relaxing positions—easily changed. Sturdy plywood—fits single or double bed—combines utility of bedboard with many advantages of hospital bed. Doctors prescribe for certain backache, heart, asthma, circulatory conditions. Thousands in use in homes, hospitals, hotels, and rest homes.

*Patent pending

The TilTable, illustrated above, makes patients more comfortable, too. Fits any bed or chair. Ideal for eating, reading and writing in bed.



PAUL H. HILL and Associates, Inc.,
1122 Dumesnil St., Louisville 1, Ky.

Ship one Adjustabed, freight prepaid, at special discount for professional use. Check attached for $25.50 (east of Denver) $29.75 (Denver and west.)

Name ..... Address .....

What other drug gives continued salicylate administration without decrease in prothrombin?

In conditions where continued massive dosages are indicated, ***Raysal-Succinate*** is worthy of every physician's consideration.

Clinical data on 396 patients[1] treated with a salicylate-succinate combination demonstrated that there was no decrease in blood prothrombin in a single case, while other patients receiving only salicylate showed an average decrease of 20 per cent in prothrombin levels.

In ***Raysal-Succinate*** the untoward effects of salicylates are modified by the addition of succinate.

Laboratory experiments[2] show that succinic acid increases the ability of the tissues to utilize oxygen from arterial blood.

Each "salol" enteric-coated tablet contains 5 grains of Raysal and 2 grains of succinic acid.

DOSAGE: One to three tablets, four times daily, depending upon the severity of the case.

BIBLIOGRAPHY: 1. Szucs, Ohio State Med. Jl., 43:1035, 1947. 2. Proger, Bull. New England Med. Center, 5:80, 1943.

Raysal-Succinate

Available at all pharmacies on prescription

OVER A QUARTER CENTURY SERVING THE PHYSICIAN

RAYMER

PHARMACAL COMPANY

Dept. MM

N. E. Cor. Jasper and Willard Streets

Philadelphia 34, Pa.

Gentlemen:

Please send me sufficient ***RAYSAL-SUCCINATE*** Tablets for a clinical trial.

_____ M.D.

Address _____

City _____ Zone _____ State _____

Washington Letter

(Continued from page 49)

ment from Rear Adm. Joel T. Boone. Dr. Boone, who is a ranking medical adviser to Johnson, said the medical services have made more progress in unification than any other branch except Military Air Transport Service. MAT was unified outright almost a year ago.

Marriages, Divorces Decline

Both marriages and divorces are on the decline. Only four states reported more marriages in 1948 than in 1947, and only one state had more divorces. These increases were far outweighed by declines of both marriages and divorces in other states.

Notes

Navy examinations for appointment as medical officer are being conducted January 16-20 in all Naval hospitals. Navy is also signing up dental reserve officers for part-time duty in examinations and record-keeping

(Continued on page 56)

"Here's a '49 model you can have dirt cheap. It was owned by a doctor."

in Hypochromic Anemias Associated with Increased Metabolic Requirements . . .

IRONCO-B

TRADEMARK

POTENTIATED IRON THERAPY

IRONCO-B* presents a potent hematinic formula in which the specific hemoglobin-stimulating value of ferrous sulfate is potentiated and supported by the inclusion of other recognized hematopoietic and nutritive factors.

Each enteric-coated (green) tablet represents:

Ferrous Sulfate U.S.P.	3	gr.
Manganese Sulfate	⅓	gr.
Dicalcium Phosphate	2	gr.
Thiamine Hydrochloride	0.3	mg.
Riboflavin	0.3	mg.
Nicotinic Acid	2	mg.
Vitamin D (As irradiated yeast)	200	U.S.P. Units
Liver Concentrate (70%-alcohol insoluble)	¼	gr.

Administration of IRONCO-B is of particular benefit in iron-deficiency anemias occurring during pregnancy, lactation, active-growth periods, convalescence, febrile illness, debility, and other states characterized by increased metabolic needs.

SUPPLIED: Bottles of 100, 500, and 1,000 tablets through prescription pharmacies or on direct order.

*Trademark of The Vale Chemical Co., Inc.

THE VALE CHEMICAL CO., INC.

Pharmaceuticals

ALLENTOWN . . . PENNSYLVANIA

BISMAKAOLIN®

Hydrated Bismuth and Kaolin Preparation

CONTINUOUS fourfold therapeutic action of BISMAKAOLIN acts efficiently to relieve the distressing symptoms of gastrointestinal inflammation and ulceration.

Antacid • Demulcent
Adsorbent • Protectant

ADVANTAGES: Nontoxic even when administered over a period of many months • Contains no carbonates to cause distressing effervescence • No secondary acid rebound • No systemic alkalosis • Protectant action helps nature's healing processes

Each fluidram contains: *Bismuth hydroxide* (bismuth content equivalent to 2½ grains bismuth subnitrate) suspended with medicinal *kaolin* and activated with *bentonite*, a hydrous mineral colloid.

INDICATED in gastritis and gastroenteritis; hyperacidity; chronic or acute diarrhea; functional disturbances of gastric secretion resulting in hyperchlorhydria.

SUPPLIED: Bottles containing 1 pt. and 1 gal.

THE VALE CHEMICAL CO., INC.
Pharmaceuticals
ALLENTOWN **PENNSYLVANIA**

PROVED

UNDER ACTUAL PRACTICING CONDITIONS

BENZEDREX INHALER

SO MUCH BETTER THAT WE HAVE DISCONTINUED BENZEDRINE* INHALER

Our new BENZEDREX INHALER was tested by rhinologists in controlled studies for more than two years. Reports were unanimously enthusiastic.

Nevertheless, to make absolutely certain that BENZEDREX INHALER was the best volatile vasoconstrictor ever developed we decided to test it with a large segment of the medical profession under actual practicing conditions.

We therefore replaced 'Benzedrine' Inhaler with BENZEDREX INHALER in the entire state of California. Now, after more than a year's use, California physicians tell us that they and their patients find BENZEDREX INHALER the best inhaler they have ever used.

BENZEDREX INHALER has exactly the same agreeable odor as 'Benzedrine' Inhaler, but gives even more effective and prolonged shrinkage, and does NOT produce excitation or wakefulness.

*'Benzedrine' (racemic amphetamine, S.K.F.) and 'Benzedrex' T.M. Reg. U.S. Pat. Off.

SMITH, KLINE & FRENCH LABORATORIES, PHILADELPHIA, PA

Yes, Doctor...

BIO-RAMO FIRST

Multiple Dose Vials Crystalline Vitamin B-12

CLARETIN

Injection

(Brand of Crystalline Vitamin B-12 — the anti-pernicious factor of liver — a pure, crystalline compound of extremely high potency)

- Pernicious Anemia with or without neurologic complications
- Pernicious Anemia in patients sensitive to liver products
- Nutritional Macrocytic Anemia due to Vitamin B-12 deficiency
- Megaloblastic Anemia of Infancy
- Sprue (tropical and non-tropical)

- Not a concentrate
- Precision dosage possible
- Antianemia potency known
- Clinical data attests the pure crystalline form
- Requires no refrigeration
- Does not cause protein reactions
- No pain on injection
- Non-toxic
- A potent and reliable product

CLARETIN INJECTION is available in 5cc. sterile multiple dose vials. Each cc. contains 30 micrograms of pure Crystalline Vitamin B-12. 0.5% phenol added as a preservative. Economically priced.

LITERATURE AVAILABLE

BIO-RAMO DRUG

Baltimore 1,

TO ANNOUNCE...

Crystalline Vitamin B-12 for Oral Use

RAMETIN

Tablets

(The prime antianemic factor of liver—a pure crystalline compound of extremely high potency not amorphous.)

Crystalline	vs	Amorphous
Potency and Purity known. U. S. P. accepted		Standardization NOT determined as to potency.

- **RAMETIN TABLETS are indicated for ORAL VITAMIN B-12 THERAPY and offer a form of investigative Vitamin B-12 medication oftentimes desirable, particularly in Pediatrics or for cases mildly symptomatic.**
- **In severe cases, parenteral Vitamin B-12 dosage, such as Claretin, is necessary as initial therapy.**
- **For maintenance, in pernicious anemia and as an adjunct to dietary improvement in nutritional macrocytic anemias, RAMETIN TABLETS offer advantages in many individual cases.**

- **RAMETIN TABLETS, palatable, soluble, scored tablets containing 5 micrograms Crystalline Vitamin B-12 per tablet. Available in bottles of 25 and 100 tablets. Economically priced.**

ON REQUEST

COMPANY, Inc.

Maryland

Washington Letter

(Continued from page 52)

at a number of Reserve Training Centers. . . . A grant of $100,000 to Oklahoma Research Foundation topped the last list of heart research grants. Total was $358,109, including $64,800 to Northwestern University for a study of rheumatic fever. . . . To date, almost a million dollars has been granted for studies of water pollution.

A new series of grants totaling $634,971 has been announced by National Cancer Institute. With these grants, 75 of the country's 79 medical schools are receiving U.S. help in cancer work. . . . A checkup on cancer training shows great variation among schools. Example: In a cancer questionnaire, the average score of seniors in one school was found to be 50% greater than the average score in another. . . . An Army-developed technic for instantaneous processing of photofluorographic films will reduce cost of x-ray screening for signs of early gastric cancer. In some respects, its efficiency is described as 10 times that of any other unit available. . . . Using a 20-foot trailer in Washington, Public Health made the first public demonstration of multiple blood testing for diabetes, anemia, syphilis, Rh-factor, and blood type.

"So you finally got the baby to sleep? Fine!"

immediate

relief

speedy

westhiazole vaginal

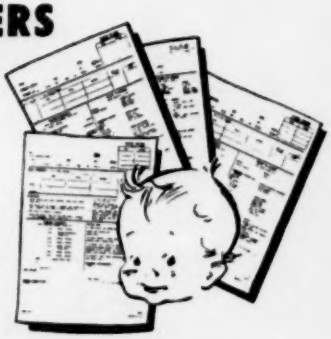
vaginitis cervicitis

westhiazole vaginal

single dose applicators

Samples

HANDY TIMESAVERS FOR YOU!



PEDIATRIC FEEDING DIRECTIONS

(birth to 3 mos., 3-6 mos., 6-10 mos., over 10 mos.)

Easy to use, complete, adaptable to individual patients. Help mothers follow your directions accurately. Each contains: formula or diet charts; food lists; food preparation methods; weight record; spaces for your directions, next appointment. Available in pads of 50 each, imprinted if desired.

ALSO... This *Gift* For Your Young Patients

Eight-page book with pictures for the youngster to color. Written in primer style. Emphasizes health practices and other good habits you and the mother want the child to develop. Yours—to give your young patients.

Use this coupon for sample copies and a postage-paid order card. After examination, mail card to order in quantity.

NO COST OR OBLIGATION!

RALSTON PURINA COMPANY, Nutrition Service
LM-4 Checkerboard Square, St. Louis 2, Mo.

Please send the FREE material checked below:

☐ C848 1 set Feeding Direction Forms
☐ C958 1 child's Color Book

*Name*_____ *M. D.*

*Street*_____

*City*_____ *Zone*____ *State*_____

When Rapid Growth Calls For HIGH IRON and THIAMINE— Remember RALSTON

Instant Ralston — enriched whole wheat cereal—is a *rich* source of iron and thiamine. A single 1-ounce serving supplies the following percentages of the minimum daily requirement:

	1-6 years	6-12 years	adults
IRON	113%	84.9%	84.9%
THIAMINE	84%	56%	42%

Plus 3.5 Gm. PROTEIN

Cooks in 10 seconds

Instant Ralston supplies riboflavin and niacin, too... in taste-appealing, readily digested form.

TUBEX®

WYCILLIN®

SUSPENSION

Procaine Penicillin for Aqueous Injection

Long-acting procaine penicillin in free-flowing, smooth aqueous suspension. *Stable*—keeps for a full year without refrigeration. In **TUBEX** form — the ready-to-inject dosage form. Saves time and effort in sterilizing syringe and needle—ideal for office and bedside injection. 300,000 units procaine penicillin G in each Tubex. Boxes of 1 and 50 Tubex.

Wyeth®

WYETH Incorporated, Philadelphia 3, Pa.

Symposium on Rickettsial Diseases

Presented at the Sixty-ninth Annual Meeting of Louisiana State Medical Society, New Orleans *

Introduction

THE incidence of rickettsial diseases in the United States is steadily increasing.

Infections by rickettsiae, once considered indigenous to limited geographical areas, are being recognized in many other locales. With the discovery of new drugs effective against the organism, early identification of the diseases is essential.

Clinical Aspects

LEWIS THOMAS, M.D.

Rocky Mountain spotted fever is the most serious rickettsial disease generally encountered in this country.

Symptoms appear abruptly in most instances with fever and arthritic and muscular pains. A profuse petechial or purpural rash appears, starting on the ankles, wrists, and forehead. All areas of the body, including the palms and soles, are rapidly involved.

Pneumonia, nephritis, iritis, or phlebitis may develop. Loss of body fluid may cause fatal shock. Blood chloride falls and nonprotein nitrogen rises. If untreated, fever persists for two or three weeks. When the rash fades a brown pigmentation is left.

Both chloromycetin and aureomycin are extremely effective against the infection, reports Lewis Thomas, M.D., of Tulane University of Louisiana, New Orleans. An initial dose of 60 mg. per kilogram of body weight is given orally. The maintenance dose is 0.25 gm. every three hours until two days after fever disappears.

Penicillin, sulfonamides, and streptomycin are of no benefit for patients with Rocky Mountain spotted fever.

Q fever involves the lungs primarily. The clinical symptoms resemble those of primary atypical pneumonia. Unlike other rickettsial diseases, Q fever does not cause skin rash.

Onset is abrupt, with fever, severe headache, and generalized aches and pains. After three or four days, a nonproductive cough appears and a chest roentgenogram will reveal patchy areas of consolidation. Vague pains may be present in the chest.

The leukocyte count is unaltered. After seven to ten days, fever disappears. Complications are rare and the mortality rate is low.

Specific therapy is usually needed only in severe cases, when either chloromycetin or aureomycin may be employed.

* Symposium on rickettsial diseases. New Orleans M. & S. J. 102:166-178, 1949.

Rickettsial pox, a new disease, was first recognized in 1946, in New York City.

Transmitted by mites, the illness begins with a small, firm, round, dark red papule. Later, vesiculation forms and, when dried, leaves a dry, black eschar. Regional lymphadenopathy usually occurs. About one week after the initial lesion, chills, fever, weakness, headache, and pain in the back develop.

On the second or third day of fever, a discrete, red, maculopapular rash arises on any part of the body except the palms and soles. The eruption resembles that of chickenpox, but vesicles are less superficial and more difficult to rupture. The vesicles open and dry, forming black crusts.

If untreated, patients recover by about the tenth day. The rickettsia causing the disease is susceptible to either aureomycin or chloromycetin.

Laboratory Tests

G. JOHN BUDDINGH, M.D.

Serologic tests for specific antibodies in the patient's blood are the most generally useful laboratory procedures for the diagnosis of rickettsial diseases. Of utmost importance is the demonstration of a rising titer of antibodies during the course of the illness.

The complement-fixation reaction is the most widely employed serologic test for rickettsia. Complement-fixing antibodies usually appear during the second week of illness and persist for six to eight years. The test is therefore valuable for epidemiologic studies.

For the diagnosis of current infections, serial tests should be done. Blood samples must be taken during the first few days of illness, during the second week, and toward the end of the third week. G. John Buddingh, M.D., of Louisiana State University, New Orleans, believes that a single sample of blood is inadequate for proper diagnosis.

The various types of rickettsia may also be identified by characteristic effects upon guinea pigs. Fresh or citrated blood, 3 to 5 cc., is injected into a male guinea pig. Rocky Mountain spotted fever causes scrotal swelling with necrosis and high fever. Murine typhus produces fever and scrotal swelling without necrosis. Fever but no scrotal reaction occurs with epidemic typhus.

A third laboratory technic, the Weil-Felix reaction, is of importance as the first presumptive laboratory indication of rickettsial disease. Weil-Felix antigens are frequently present as early as the sixth day of the disease. However, unless the titer is 1:320 or more, positive results from a single specimen are not reliable. The Weil-Felix reaction is negative in Q fever.

Although laboratory tests are of value in confirming the nature of rickettsial diseases, clinical diagnosis is imperative if therapy is to be started early.

Pathology

JOSEPH ZISKIND, M.D.

Rickettsiae are pleomorphic coccobacillary microorganisms. They are obligate intracellular parasites.

The pathology of the rickettsial diseases primarily concerns the small

blood vessels. Most severely affected are vessels in the skin, subcutaneous tissue, and central nervous system. However, points out Joseph Ziskind, M.D., of Tulane University, New Orleans, all tissues and organs may show vascular lesions of varying severity, depending upon the species of rickettsia.

The kidneys show an interstitial nephritis as well as diffuse vascular damage. Widespread swelling of the endothelial cells occurs in the liver. Lymphoid depletion, inactive follicles, and an increase in macrophages are found in the spleen, which becomes engorged.

In *Rocky Mountain spotted fever* the most severe vascular lesions occur in the skin and subcutaneous tissue. Necrosis of the media of arteries and veins is seen. Ulceration of the scrotum, fingers, toes, elbows, and ears may occur. The brain and heart are slightly involved.

Vascular lesions are less severe with *scrub typhus* than with Rocky Mountain fever, but central nervous system changes are more serious.

Necrosis may occur at the mite bite. Infiltration of the leptomeninges, perivascular cellular accumulations, and slight cerebral edema are seen. In addition, circumscribed focal nodules develop, especially in the gray matter. These nodules consist chiefly of neuroglial cells with few lymphocytes and plasma cells.

In the heart, endothelial swelling, occasional thrombosis, and collections of lymphocytes, histiocytes, and plasma cells are seen. A diffuse cellular infiltration with occlusion of alveolar capillaries appears in the lungs.

In *epidemic typhus* skin necrosis is found in areas of pressure. The brain is severely involved.

The pathology of *Q fever* differs from that of any other rickettsial disease. The lungs are involved primarily. Patchy areas of interstitial pneumonia develop. The exudate contains fibrin, erythrocytes, plasma cells, lymphocytes, and large mononuclear cells. Pleural effusions sometimes form. The skin is not affected.

Epidemiology

R. L. SIMMONS, M.D.

Rickettsial diseases are transmitted to man by ticks, fleas, and lice. The reservoir may be rodents, an arthropod colony, or man. Some types of rickettsial diseases are endemic in this country, others are potentially epidemic, reports R. L. Simmons, M.D., of Louisiana State University, New Orleans.

Murine typhus has been reported in the southern states, Alabama, Florida, Georgia, Louisiana, Mississippi, North and South Carolina, and Texas, most frequently in summer and early fall. The causative organism, *Rickettsia prowazeki mooseri*, is harbored by the common rat, and infection is transmitted to man by the rat flea. An attack confers immunity that may last many years.

Persons living or working in rat-infested locations are the most apt to have murine typhus. Control measures are directed against rats and rat fleas. Such measures include:

- ► Correct garbage disposal and elimination of garbage dumps
- ► Rat-proofing of buildings
- ► Destruction of rats by trapping and poisoning

► Dusting of rat runways with DDT.

A vaccine is available which may be used when an outbreak of typhus is anticipated.

Rocky Mountain spotted fever is seen in all regions of the United States. Several species of ticks are capable of transmitting the causative organism, *Rickettsia rickettsi*, to man. The ticks serve as a reservoir, since the rickettsiae are passed from adult ticks to the progeny.

The disease occurs chiefly in the spring in the West, and throughout the summer in the East and South. Attempts to eliminate the ticks which spread spotted fever have been unsuccessful. Proper clothing, personal hygiene, and frequent searching for ticks on the body are advisable to prevent infection in infested areas.

Immunity may be obtained by prophylactic vaccine, administered before the tick season begins. The inoculations must be repeated each year.

Epidemic typhus occurs under conditions of war and famine when sanitary measures break down. Man serves as the reservoir for *Rickettsia prowazeki*. The body louse is the vector. An effective vaccine is available for prophylactic use.

The disease has not become a serious problem in the United States.

SIGN OF LIFE, useful for determining whether resuscitation measures should be continued, is elicited by subcutaneous injection of 1 or 2 cc. of ether. M. Rebouillat, M.D., of Paris, explains that the ether exudes from a dead person's skin but remains at the site of injection if the patient is still alive. This simple technic may be employed instead of arteriotomy and the fluorescein test to determine apparent death, especially of the newborn.

Bull. Acad. de méd., Paris 133:460, 1949.

IMPROVEMENT OF BOWEL FUNCTION, when the manifestation of irritable bowel is constipation or diarrhea, may be obtained by oral administration of methylcellulose. The material, available in 0.5-gm. tablets as Cellothyl, has no effect in the stomach or small intestine, but produces the desired bulk by the time the lower part of the ileum and colon is reached. For stoma of the sigmoid with watery fecal discharge, J. Arnold Bargen, M.D., of the Mayo Clinic, Rochester, Minn., finds that 6 tablets every four hours are effective. Stools decrease in frequency and assume a soft jelly-like consistency within twenty-four hours. Severe constipation is relieved by suitable diet and ingestion of 4 tablets every four hours. After initial control of intestinal activity, 2 tablets a day may maintain normal function. The medication is of little value in severe forms of diarrhea such as that of extensive ulcerative colitis.

Gastroenterology 11:275-279, 1949.

General Adaptation Syndrome

HANS SELYE, M.D.*
Université de Montréal

In response to long-continued stress of any kind, certain protective physiologic mechanisms are set in motion. The endocrine glands, particularly the pituitary and adrenal, contribute prominently to these defense reactions.

Although primarily beneficial, excessive or abnormal reactions to stress may cause diseases of adaptation; hypertension, nephrosclerosis, and rheumatic diseases are examples.

Hans Selye, M.D., divides the general adaptation syndrome into the alarm reaction, the stage of resistance, and the stage of exhaustion (Fig. 1).

Agents which cause local damage evoke only slight alarm reaction. Cold, exercise, roentgen radiation, infections, and intoxications produce severe alarm reactions.

The alarm reaction follows sudden exposure to a noxious stimulus. Phenomena of shock occur, such as hypotension, hemoconcentration, hypothermia, increased capillary permeability, and central nervous system depression.

Resistance to the specific stimulus and to other damaging stimuli is decreased. Countershock phenomena, notably enlargement of the adrenal cortex and hypersecretion of corticotropins and corticoid hormones, also occur.

Usually shock and countershock are associated.

Continued stress after adaptation develops leads to the stage of resistance. Resistance to the specific stimulus increases but with loss of antagonism to other damaging agents. If adaptation fails, the stage of exhaustion ensues with collapse of all defense and eventual death.

The manner by which stress initiates the chain reactions of adaptation is unknown, but two courses may be assumed (Fig. 2). One leads to shock, possibly through nervous stimuli, deficiencies, or toxic metabolites. The other, the defense mechanism, depends upon activities of the hypophysis and adrenal glands.

The hypophysis liberates excessive amounts of corticotropic hormones, and other hypophyseal secretions are decreased. The consequence is gonadal involution and cessation of somatic growth. In response to corticotropin, the adrenal cortex enlarges and secretion of cortical hormone is augmented.

The organic corticoids produce changes in organic and inorganic metabolism, as well as atrophy of the thymus and other lymphatic tissues, and increase hypertensinogen production. The latter reacts with renin to form hypertensin, a vasopressor substance.

* The general adaptation syndrome and the diseases of adaptation. Practitioner 163:393-405, 1949.

The inorganic corticoids cause retention of sodium with resultant increase in blood volume. This plethora contributes to elevation of blood pressure.

The inorganic corticoids also induce renal nephrosclerosis, probably by reason of sodium retention. Renal pressor substances such as renin are produced in excess, presumably as a result of diminution of glomerular blood flow due to nephrosclerosis. A vicious cycle is then set up: Nephrosclerosis aggravates hypertension and hypertension provokes nephrosclerosis.

The mineral-corticoids may also damage the tubules, which cannot then inactivate renin. This circumstance would contribute another factor to inducement of hypertension and nephrosclerosis. Aschoff nodules or infarcted areas may develop in the heart.

The chief clinical implication of the general adaptation syndrome is that disease may result from the prolonged exposure to nonspecific damaging stimuli. How hypertension could thus be caused is apparent. The same may be said for nephrosclerosis, and possibly for nephritis and rheumatic disease. The particular manifestation in which endogenous hormonal intoxication appears clinically is probably determined by heredity, diet, and other factors.

CHANGES IN SPECIFIC AND CROSSED RESISTANCE

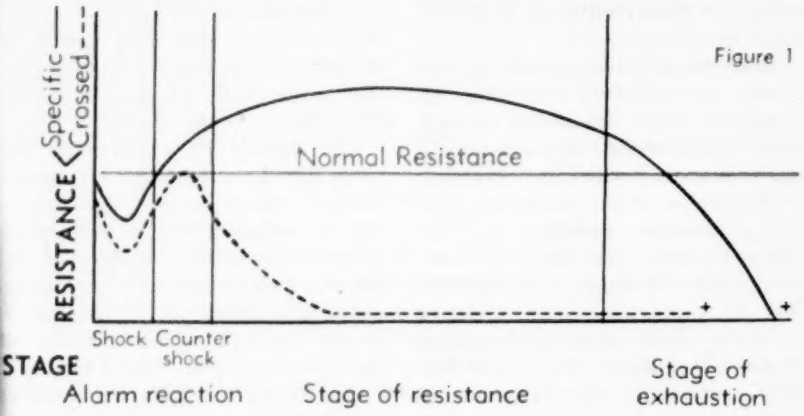


Figure 1

Since the above report was prepared we have been advised that the material covered represents a chapter in the second edition of Dr. Seyle's Textbook of Endocrinology. *The volume, published by Acta Endocrinologia Inc., Montreal, was released late in 1949.—Ed.*

FUNCTIONAL INTERRELATIONS DURING THE GENERAL ADAPTATION SYNDROME

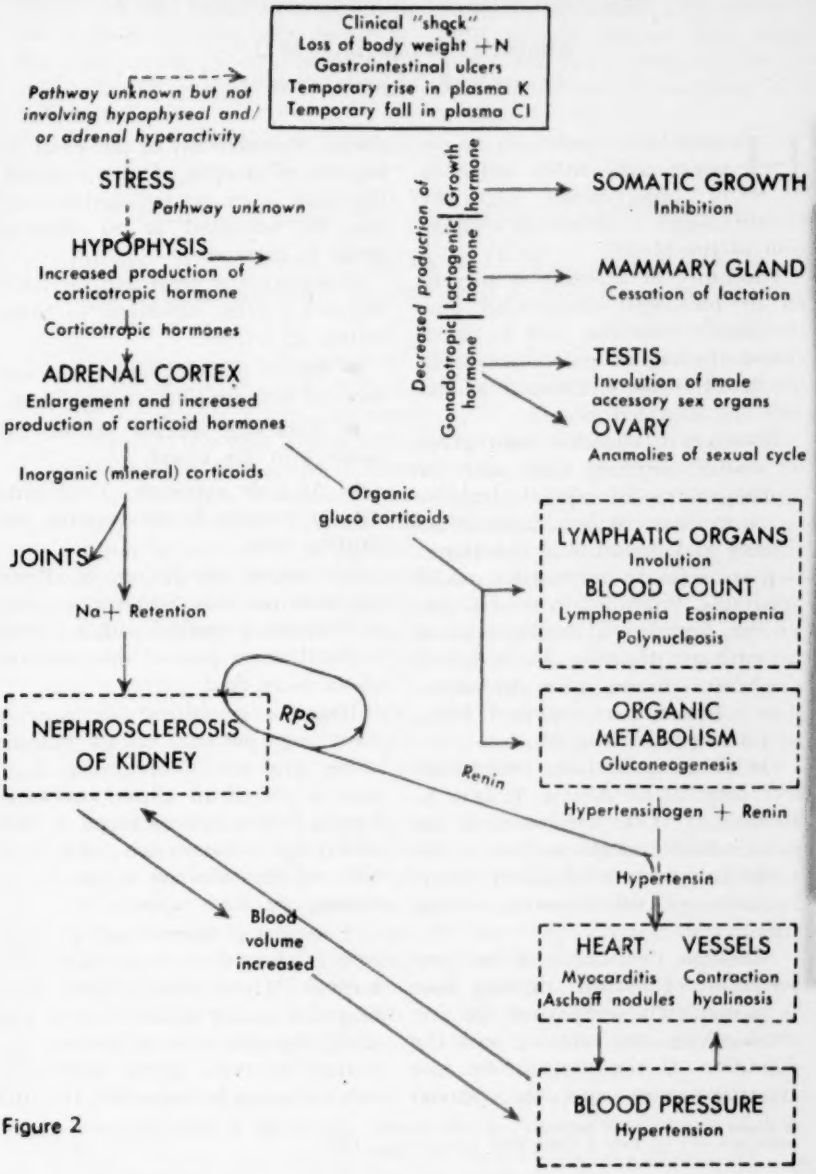


Figure 2

Blood Coagulation in Leukemia and Polycythemia

ROBERT L. ROSENTHAL, M.D.*
University of California, Berkeley

HEMORRHAGIC tendencies of patients with either leukemia or polycythemia vera are closely related to defects in coagulation of the blood.

Possibility of bleeding is suggested by prolonged coagulation time in chronic leukemia, and by accelerated clotting in polycythemia. In the latter instance, thrombotic hazards are indicated as well.

Information obtained from platelet counts, bleeding time, and the tourniquet test for capillary fragility is approximate at best. Electric resistance measurements of clot retraction are accurate but require special apparatus. Prothrombin time is useful for detecting a specific type of hemorrhagic dyscrasia. The value of Lee-White clotting time determination is likewise circumscribed, being useful chiefly in hemophilia.

Of all the procedures used to detect coagulation defects, Robert L. Rosenthal, M.D., believes that the most valuable single method is the simplified and standardized determination of the heparin clotting time.

Although mechanism of the prolongation of heparin clotting time is incompletely understood, the test yields results that correlate with the condition of the patient, the clot retraction rate, and the platelet count. Measurement of the effect of heparin on clotting of venous blood, therefore, is an aid to diagnosis and may be employed as an effective guide to therapy.

Elimination of error and variation requires careful attention to three factors in technic:

► Precise measurement of the volumes of heparin solution and blood.

► Thorough mixing of the heparin with the blood.

► As little agitation of the mixture as possible in determining the clotting time.

For rapid estimation, a Pyrex test tube 100 mm. long and 13 mm. in diameter is marked with a scratch at the bottom part of the meniscus of 1.1 cc. of fluid.

Heparin is diluted to provide 0.004 mg. per 0.1 cc. of isotonic saline. Just 0.1 cc. of heparin solution is placed in a dry test tube. Freshly drawn venous blood is then added up to the scratch mark. Contents of the tube are mixed by inverting the tube twice.

A stopper is inserted and the mixture is allowed to stand for twelve minutes. Then, with as little agitation and tilting of the tube as possible, the clot is examined at one-minute intervals. At the end point, when clotting has occurred, the tube

* Blood coagulation in leucemia and polycythemia: value of the heparin clotting time and clot retraction rate. J. Lab. & Clin. Med. 34:1521-1535, 1949.

can be completely inverted without escape of any fluid. Normal limits for clotting time are from twenty to thirty-five minutes. The average normal value is twenty-seven and one-half minutes.

The heparin clotting time determination is readily adaptable to both routine clinical and experimental use and permits the detection of either abnormally increased or decreased clotting ability.

Aureomycin for Rheumatic Disease

THOMAS MCP. BROWN, M.D., RUTH H. WICHELHAUSEN, M.D., LUCILLE B. ROBINSON, AND WILLIAM R. MERCHANT, M.D.*

AUREOMYCIN has two significant effects on arthritis associated with pleuropneumonia-like organisms. Symptoms are often relieved, and bacteria are always eliminated.

Prostatic secretion from several patients with rheumatoid arthritis, examined by Thomas McP. Brown, M.D., Ruth H. Wichelhausen, M.D., Lucille B. Robinson, and William R. Merchant, M.D., of George Washington University, Washington, D.C., yielded the L organisms for periods up to eighteen months, in spite of constant gold therapy and symptomatic remission. In 1 instance aureomycin was substituted and cultures became sterile.

The antibiotic abolished L organisms from the genital tract in 9 cases of miscellaneous disease, including erythema nodosum, rheumatic fever, rheumatoid arthritis, and nonspecific urethritis. Of 4 persons with nonspecific urethritis, 2 had joint and muscle complaints and 1 had L organisms in prostatic secretion. All symptoms were relieved in two days by 2 gm. of aureomycin daily, and cultures became sterile.

Aureomycin was used in 25 rheumatic cases. Most of the patients had had rheumatoid arthritis, Marie-Strümpell spondylitis, rheumatic fever, or erythema nodosum for several years. In 8 instances cervical and prostatic secretions contained pleuropneumonia-like organisms.

Dosage varied from 0.25 to 2.5 gm. per day. Subjective and objective improvement occurred in 17 instances. In all subjects not benefited by therapy, aureomycin levels in serum were low. Although in some cases muscle and joint symptoms initially became worse and fever rose, improvement generally began in one to four weeks and was maintained.

L organisms disappeared more rapidly than symptoms and were affected by smaller doses.

* The in vivo action of aureomycin on pleuropneumonia-like organisms associated with various rheumatic diseases. J. Lab. & Clin. Med. 34:1404-1410, 1949.

The New Antibiotics

DAVID FIELDING MARSH, Ph.D.*
West Virginia University, Morgantown

INTENSIVE efforts of many research teams investigating new antibiotics have now produced sufficient data for the rational therapeutic application of several of these materials, even though complete information may be lacking. The pharmacology of antibiotics discovered since penicillin and streptomycin is concisely presented by David Fielding Marsh, Ph.D.

DIHYDROSTREPTOMYCIN

Occurrence and stability—The trihydrochloride and sulfate are available. The dry powder is stable for eighteen months at room temperature; solutions evince no appreciable loss of potency for a month.

Action—Dihydrostreptomycin is bacteriostatic and bactericidal systemically against gram-negative organisms and *Mycobacterium tuberculosis* and locally against gram-negative bacterial wound infections. Since many organisms rapidly develop tolerance to the agent, other antibiotics are better for local use.

Dihydrostreptomycin does not affect bacteria that have acquired tolerance to streptomycin.

Absorption and distribution—Optimum effect is by intramuscular injection; 1 gm., as free base, produces blood levels as high as 30 to 75 mg. per cubic centimeter. Effective levels can be maintained for as long as twelve hours by this route. Pain of injection is less with 1% procaine hydrochloride as a diluent, restriction of the total volume to 2 cc., and slow administration, only once per twelve hours, deep into the region of the gluteal muscles.

The material is not absorbed from the gastrointestinal tract. Excretion is too rapid on intravenous administration. No procedures to delay absorption or excretion are known.

Fate and excretion—After systemic administration, dihydrostreptomycin is highly concentrated in the urine within twenty-four hours, although excretion may continue for a long period.

Therapeutic use in tuberculosis—Greatest use of dihydrostreptomycin is adjunctive to other therapy for tuberculosis. The antibiotic is not definitive treatment nor a substitute for rest and other measures. Benefits are greatest with diffuse, extensive, progressive lesions. The agent often diminishes spread of infection and reduces pain, and may be valuable in pre- and postoperative management.

Because organisms rapidly become tolerant to dihydrostreptomycin, the compound should be reserved for particular phases of tuberculosis.

Very encouraging results have been achieved in:

► Tuberculous meningitis by in-

* A concise pharmacology of the new antibiotic agents. West Virginia M. J. 45:280-284, 1949.

tensive parenteral and intrathecal therapy.

► Acute hematogenous miliary tuberculosis.

► Severe tuberculous laryngitis and ulcerative tuberculous lesions of the oropharyngeal mucosa by combined topical and parenteral therapy.

► Progressive ulcerating lesions of the tracheobronchial tree not involving fibrous strictures.

Value of dihydrostreptomycin is uncertain in acute ulcerative tuberculous enteritis, genitourinary tuberculosis, bone and joint tuberculosis, tuberculosis involving eyes and skin, or tuberculous lymphadenitis without sinuses.

Dihydrostreptomycin is advisable for the pneumonic form of pulmonary tuberculosis but is not recommended for minimal or primary pulmonary tuberculosis that improves readily with routine treatment.

Therapeutic use in other conditions—For bacterial infections of the urinary tract, if obstruction is not present and organisms are susceptible, dihydrostreptomycin is preferable because of low toxicity. The agent will not be successful unless organisms are antagonized by 16 mg. per cubic centimeter or less in vitro. Efficiency is enhanced in an alkaline medium, and systemic alkalinization of the urine may be indicated. Good results are usually obtained with *Escherichia coli* infections, poor results with *Pseudomonas aeruginosa* and *Streptococcus faecalis*.

Patients with respiratory tract infections caused by *Klebsiella pneumoniae* and *Hemophilus influenzae* are much benefited when dihydrostreptomycin is given intramuscularly and by aerosol. Old chronic infections may or may not be helped.

When therapy is started early, conditions caused by *H. influenzae, Proteus vulgaris, Esch. coli,* or *Ps. aeruginosa* are eliminated in patients with meningitis.

Dihydrostreptomycin is probably advisable for tularemia.

Dosage—The basic dose is 0.5 to 1 gm. as the free base intramuscularly every twelve hours. In tuberculous conditions, this is given for sixty to one hundred and twenty days. In urinary tract infections, up to 4.5 gm. per day for four days may be given. In respiratory tract infections, administration is usually for about ten days; and in meningitis and tularemia, until the desired response is obtained. The compound is available in sterile, rubber-capped vials containing the equivalent of 1 and 5 gm.

Toxic effects—With prolonged administration dihydrostreptomycin exerts some influence on the vestibular apparatus and reduces auditory acuity. A low-pitched tinnitus indicates the onset of nerve deafness for low tones; the drug should be continued only with circumspection. Cardiovascular effects are very rare, although renal irritation (proteinuria, hematuria, and occasional azotemia) sometimes occurs, particularly in patients with concurrent renal impairment. Skin or allergic reactions are infrequent and can usually be controlled with antihistamines. Side effects ordinarily disappear on withdrawal of the drug. Dihydrostreptomycin is less than half as toxic as streptomycin and about equally effective.

CHLOROMYCETIN

Occurrence and stability—Chloromycetin (chloramphenicol) is slightly soluble in water and is stable at room temperature.

Action—The agent is systemically and locally active against many gram-negative and some gram-positive organisms, against rickettsiae, and some spirochetes, but is not very effective against malaria or generalized pneumococcus or streptococcus infections. Chloromycetin has almost no systemic action in man other than antibiotic action and does not affect hemopoiesis.

Absorption and distribution—Although aqueous or propylene glycol solutions can be given parenterally, the agent is conveniently taken orally since it is not destroyed in the gastrointestinal tract and is completely absorbed. In man, 3 gm. by mouth attains a maximum serum level of 50 mg. per cubic centimeter in two hours, 25 mg. per cubic centimeter at the end of six hours, and completely disappears in twelve to sixteen hours.

Fate and excretion—Only 3 to 8% is excreted unchanged in the urine; the remainder is excreted as the inactive monoglycuronide. No procedure is available for prolonging the action of a single dose or diminishing excretion.

Therapeutic use—Limited trials indicate that chloromycetin may be effective for treatment of rickettsial infections (including epidemic typhus, typhoid fever, and Rocky Mountain spotted fever), acute undulant fever, and some bacillary dysenteries. The agent offers particular benefit for widescale therapy of infection from organisms, such as some gonorrhea organisms, that have become resistant to other antibiotics and to sulfonamides.

Chloromycetin has shown some promise in treatment of primary atypical pneumonia, whooping cough, psittacosis, scrub typhus, lymphogranuloma, and various urinary tract infections.

Dosage—An initial oral dose of 50 mg. per kilogram is followed with 200 to 300 mg. every two to four hours until the patient's temperature has been normal for four or five days. Many patients become afebrile in two or three days. Chloromycetin is available as 250-mg. capsules.

Toxic effects—No cause for withholding or withdrawing this antibiotic is known except conditions caused by nonsusceptible organisms.

AUREOMYCIN

Occurrence and stability—The yellow crystalline hydrochloride is stable while dry. Solutions are reliable for only two days even though refrigerated and buffered.

Action—The agent is bacteriostatic and bactericidal against many gram-positive and gram-negative bacteria, rickettsiae, and organisms that have developed resistance to penicillin, streptomycin, or sulfonamides. Activity is apparent against most gram-positive organisms at 1 μg. per cubic centimeter in vitro, against most gram-negative organisms and staphylococci at 25 μg. per cubic centimeter, but against *P. vulgaris* and *Ps. aeruginosa* only at many times this level.

Absorption and distribution—Oral administration is convenient. Doses of 1 gm. every six hours produce

plasma levels of about 2 μg. per cubic centimeter with the maximum level maintained from the second to eighth hour after administration. Intramuscular injection, if indicated, is considerably less painful if 1% procaine hydrochloride solution is used as solvent.

Fate and excretion—The material is highly concentrated in the urine, although excretion may be continuous for two or three days after a single dose.

Therapeutic use—An important use is in conditions caused by organisms resistant to penicillin, streptomycin, or sulfonamides. The material is highly active against rickettsial infections (Rocky Mountain spotted fever, Q fever, typhus, rickettsialpox, lymphogranuloma venereum, and psittacosis), has considerable activity against acute brucellosis, primary atypical pneumonia, and coli-aerogenes infections of the urinary tract or peritoneum.

Action against the *Salmonella* infections, including typhoid fever, has not been established. The agent has no demonstrated value in virus infections or those caused by *P. vulgaris* or *Ps. aeruginosa*.

However, against penicillin-sensitive gram-positive cocci, penicillin should be used.

Dosage—Initial dosage should be adequate. For severe infection, 50 to 100 mg. per kilogram should be given orally per day in divided doses. Therapy must often be prolonged for five to fourteen days, depending on response. For slight infection 25 to 50 mg. per kilogram daily may be given. Aureomycin is available as 50- and 250-mg. capsules. A solution containing 10 mg. with 26 mg. l-leucine may be given to those unable to tolerate other preparations orally.

For ophthalmic purposes, a solution of the borate (5 mg. per cubic centimeter) may be applied topically every two hours for forty-eight hours or longer in staphylococcic, pneumococcic, and influenzal conjunctivitis and similar conditions. The material is available in 25-mg. bottles with buffer added, requiring only the addition of 5 cc. distilled water; in 15-mg. troches; and as an ointment containing 30 mg. per gram.

Toxic effects—A not particularly severe nausea and slight diarrhea are fairly common. Doses as high as 500 mg. per kilogram daily have been given to a few persons without untoward effects. Allergic phenomena may be observed that will require treatment with antihistamines or withdrawal of the antibiotic.

BACITRACIN

Occurrence and stability—Light tan powders are available that are freely soluble in water with an activity of 30 to 40 units per milligram; 57 units per milligram is the maximum that has been obtained. The preparations are filtrable and are stable for fifteen minutes at 100° C. The dry material in sealed vials is stable for at least eighteen months at room temperature. Solutions should not be kept longer than three weeks in refrigerators.

Action—The agent is active against many gram-positive streptococci and staphylococci, as well as pneumococci, gonococci, meningococci, *Endamoeba histolytica*, and *Spirochaeta*

pallida. Bacitracin is inactive against most gram-negative organisms. The material is not inactivated by blood, pus, necrotic tissue, or penicillinase. No "bacitracinase" has been discovered.

The antibiotic is active systemically with prolonged duration, but is not used by this route because of the possible hazard of kidney damage.

Therapeutic use—Bacitracin is extremely active in inhibiting bacteria in carbuncles and other localized infections, including infected and nonhealing wounds. The drug is useful for therapy of external ocular infections.

Dosage—The material may be infiltrated into and around a wound or applied by wet dressing at optimal concentration of 500 units per cubic centimeter. Bacitracin is available in 20-cc. vials containing 2,000, 10,000, and 50,000 units, as a 500-unit per gram ointment and also as a 500-unit per gram ophthalmic ointment.

Toxic effects—An insignificant incidence of allergic reaction may appear with local application. The drug should be infiltrated with great caution in individuals with renal impairment and should not be used for systemic infection.

GRAMICIDIN

Poorly soluble and highly toxic systemically, gramicidin has been difficult to use. Recent preparations have enhanced chemotherapeutic activity by the addition of dispersing or surface-tension-lowering agents for topical use only. Preparations are available as cough drops (0.25-mg. troches), with added vasoconstrictor for nasal use (0.005% solution), and as an ointment (0.25 mg. per gram) for superficial skin conditions such as impetigo or infected dermatitis.

AEROSPORIN

Early strains of aerosporin produced a nephrotoxic factor.

POLYMYXIN

The polypeptide material produces renal tubular dysfunction and is not suitable for clinical use in present form, although activity is high against gram-negative organisms, and microorganism resistance does not develop.

HODGKIN'S DISEASE may be alleviated by treatment with testosterone and amino acids. When male hormones, histidine, glycocoll, and tryptophane were administered during an acute attack of lymphogranulomatosis, symptoms disappeared and the patient was able to resume normal activities. The disease had been only temporarily abated by roentgen and anatoxin therapy during episodic attacks over a five-year period. P. Broco, M.D., and A. Sluczewski, M.D., of Paris, report that testosterone apparently lowered the patient's fever and hypercalcemia but increased the serum magnesium. Good effects have continued during an observation period of fifteen months.

Bull. Acad. de méd., Paris 133:461-466, 1949.

Single Serum Studies of Jaundice

F. W. Hoffbauer, M.D., E. D. Rames, M.D., and J. K. Meinert, M.D.*

University of Minnesota
Minneapolis

University of Michigan
Ann Arbor

The differentiation of parenchymal liver disease and extrahepatic biliary obstruction is of paramount importance in the care of patients with jaundice. Sound clinical evaluation of the history, physical findings, and course of the illness is a prime requirement. Laboratory tests of liver function are auxiliary aids.

F. W. Hoffbauer, M.D., Lt. E. D. Rames, M.C., A.U.S., and J. K. Meinert, M.D., employ a group of tests of liver function to assist in the differential diagnosis of jaundice. These studies may all be performed on a single serum sample. Normal values are given in Table 1.

TABLE 1. BIOCHEMICAL PROCEDURES EMPLOYED

Procedure	*Normal Value*
Serum bilirubin	1′ (prompt direct) 0.2 mg. per 100 cc. (total, direct plus indirect) 1.0 mg. per 100 cc.
Cephalin-cholesterol flocculation (24-hr. reading)	1+ or below
Thymol turbidity (MacLagan)	0 to 4 units
Serum cholesterol (total)	180 to 220 mg. per 100 cc.
Serum cholesterol (esterified fraction)	50 to 65% of total
Alkaline phosphatase (Bodansky)	1 to 4 units per 100 cc.

The results of these tests in typical cases of extrahepatic biliary obstruction and parenchymal liver disease are given in Table 2. The serum bilirubin, while of value in differentiating retention and regurgitation jaundice, is of little assistance in separating cases of intra- and extrahepatic biliary disease.

Parenchymal liver disease such as cirrhosis or hepatitis usually causes chiefly hepatocellular dysfunction, and in most instances the cephalin-cholesterol flocculation will be above 1 plus in twenty-four hours and thymol turbidity over 4 units. The total serum cholesterol tends to be below 225 mg. per cent but this is not as significant as is an associated reduction in the esterified fraction. The serum alkaline phosphatase may be normal or only slightly elevated.

Patients with cirrhosis or hepatitis may have liver function alterations suggesting extrahepatic biliary obstruction. In these instances the dysfunction is often primarily cholangiolar, such as cholangiolitic cirrhosis.

* Limitations and merits of a single serum sample analysis in the differential diagnosis of jaundice. J. Lab. & Clin. Med. 34:1259-1278, 1949.

Differentiation of this form of parenchymal disease from jaundice due to cancer or gallstones is difficult and may even be impossible. The cephalin-cholesterol flocculation and thymol turbidity tests may be normal, the total serum cholesterol may be elevated with normal ester fraction, and the serum alkaline phosphatase may reach a high level.

With typical extrahepatic biliary obstruction, cephalin-cholesterol flocculation should be normal. This was true in all but 4 of 77 patients with this form of jaundice. The thymol turbidity should also be normal, and was in 71 of the 77 patients.

Although the serum cholesterol is elevated in most cases of obstructive jaundice, 20 of 77 such cases in this series had values of less than 225 mg. per cent. The cholesterol ester fraction was even less reliable, being under 50% of the total almost half the time, especially when the extrahepatic obstruction was caused by cancer.

The serum alkaline phosphatase exceeds 10 Bodansky units in most cases of obstructive jaundice, particularly if carcinoma is the cause.

TABLE 2. ANTICIPATED RESULTS IN BIOCHEMICAL TESTS

Type of Liver Disease	*Cephalin-Cholesterol*	*Thymol Turbidity*	*Total Serum Cholesterol*	*Cholesterol Ester*	*Alkaline Phosphatase*
Extrahepatic obstruction	1+ or below	0 to 4 units	Above 225 mg. per 100 cc.	Above 50%	Above 10 units
Parenchymal liver disease	Above 1+	Above 4 units	Below 225 mg. per 100 cc.	Below 50%	Below 10 units

POSTOPERATIVE POTASSIUM DEFICIT is common but preventable. Henry T. Randall, M.D., and associates observed loss of serum potassium in three groups of patients at the Columbia-Presbyterian Medical Center, New York City. One group received parenteral fluids after operation. Second and third groups were given the same parenteral fluids but starting three days before surgery. The last group was also given 50 milliequivalents of potassium per day parenterally. In all divisions potassium loss was greatest on the first day of parenteral feeding but increased on the operative and first postoperative day. Values fell below normal in the second group but not in the third, except on the day of surgery. A useful mixture for oral therapy consists of 1 gm. each of potassium acetate, bicarbonate, and citrate, with water added to make 8 cc. Thrice daily 4 cc. is given in fruit juice.

Surgery 26:341-363, 1949.

Therapy of Postoperative Lung Atelectasis

H. MÉTRAS, M.D., AND L. HARTUNG, M.D.*
Marseille, France

BRONCHIAL obstruction following surgery is manifest as respiratory distress, associated with anoxia, and a homogeneous lobar or segmentary opacity on roentgenograms. To avoid congestion and pneumonia of an airless lung, H. Métras, M.D., and L. Hartung, M.D., vigorously thump the thorax to assist the dislodgment of bronchial plugs.

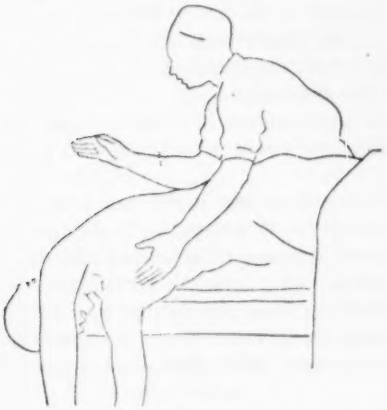


Figure 1

In preparation for this maneuver the patient is placed so that the bronchus coming from the collapsed lung segment or lobe inclines toward the trachea.

For example, with atelectasis involving the left lobe, the patient should lie on his right side with the head lower than the pelvis (Fig. 1); with collapse of the middle ventral portion of the lung, the patient should lie on his back.

Percussion consists of striking alternately the anterior and posterior thoracic wall in the region involved. The force employed, comparable to that used for a hard slap, is executed with the palm of the hands or the inner side of the fingers; the hand should follow through the gesture.

The thorax must be well shaken without causing pain. Children will tolerate this energetic performance well.

After about 50 anterior and posterior blows the patient is instructed to cough. To render the cough productive, exhalation is assured by placing a hand under the costal border and pressing strongly on the diaphragm through the abdominal wall (Fig. 2).

These manipulations should last

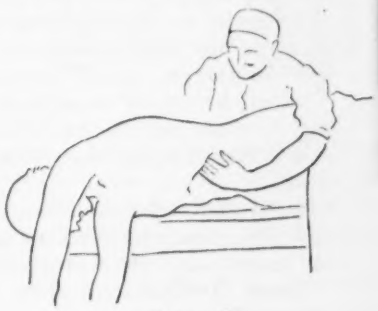


Figure 2

* Traitement de l'atélectasie pulmonaire post-opératoire. Presse méd. 59:829, 1949.

for seven to eight minutes each and are repeated every hour.

For all of 9 patients so treated, atelectasis disappeared within twelve to twenty-four hours of the beginning of the maneuvers, sometimes following the first series.

After completion of the percussion, bronchial dilatation can be maintained by epinephrine and prostigmine.

Nutrition after Gastrointestinal Surgery

CHESTER M. JONES, M.D.*

SURGICAL removal of portions of the stomach or bowel often creates difficult nutritional disturbance because of the loss of secretory or absorptive surfaces. Also, short-circuiting operations on the intestines can interfere with motility. The resultant improper food utilization sometimes produces a sprue-like syndrome.

After subtotal gastric resection for peptic ulcer, one-third of patients fail to gain weight satisfactorily and about 1 of 7 becomes a serious nutritional problem.

Progressive weight loss or inability to gain weight is the most common manifestation and may be accounted for by anorexia, the dumping syndrome, and, possibly, inadequate mixture of pancreatic fluid with food. When the lower two-thirds of the stomach is removed, a component of gastric secretion controlling food absorption may be lost. Loss of weight is often associated with loose, frequent bowel movements, steatorrhea, abdominal cramps, distention, and signs of vitamin deficiency.

Chester M. Jones, M.D., of Harvard University, Boston, reports increased fat content of the stools of patients after subtotal gastric resection. Pancreatic extract, bile salts, liver extract, and hydrochloric acid fail to correct the faulty fat metabolism.

Tween 80, an emulsifying agent, effectively increases fat absorption: 40 to 50 mg. is given orally for each gram of fat in the diet. The fecal fat content quickly diminishes and nutrition improves.

Other therapeutic measures include constant, prolonged overfeeding. A caloric intake of 70 to 80 calories per kilogram of body weight is desirable. The diet should also have sufficient protein to allow for waste.

Bulky and high-residue foods should be avoided as much as possible. Frequent small feedings are advisable. Physical activity should be limited until the desired weight gain is achieved.

Crude liver extract is often helpful and may be tried. Vitamins are supplied for specific deficiencies.

* Nutritional aspects of anastomotic operations. California Med. 71:253-259, 1949.

Simple Treatment of Ingrown Toenail

ROBERT W. NEWMAN, M.D.*
State University of Iowa, Iowa City

A TOENAIL grows into surrounding flesh chiefly because the natural groove has been filled by soft tissue as the result of ill-fitting footwear or faulty trimming of nails.

To reestablish the lateral sulcus, Robert W. Newman, M.D., applies a light stainless steel plate with underturned edge. The operation is easily and rapidly done at the office.

Because the underlying cause is corrected the results are satisfactory, prompt, and permanent.

An extensive inflammatory reaction should be allayed by hot soaks before surgery. If infection is well localized, the procedure may be performed immediately. The plate provides excellent drainage.

Before use, the plate, 3 sizes of which are kept on hand, is trimmed to exact fit and placed in antiseptic solution. Novocain is injected quickly under pressure sufficient for immediate anesthesia and absolute hemostasis (Fig. *a*). Swollen tissue is cut from the sulcus line to expose the ingrown tip of nail (Fig. *b*).

The bent margin of the metal plate (Fig. *c*) is slipped under the nail edge (Fig. *d*) and gently pushed proximally (Fig. *e*), but not beyond the eponychium. The distal end of the plate should extend past the soft tissue.

The plate is secured with adhesive tape (Fig. *f*), and sterile gauze is applied with narrow bandage and tape.

If both sides of the same toe are involved, two small plates are used.

The foot can bear weight immediately, and soreness generally subsides in two or three days. The outer dressing is changed on the third day, then by the patient when necessary. The

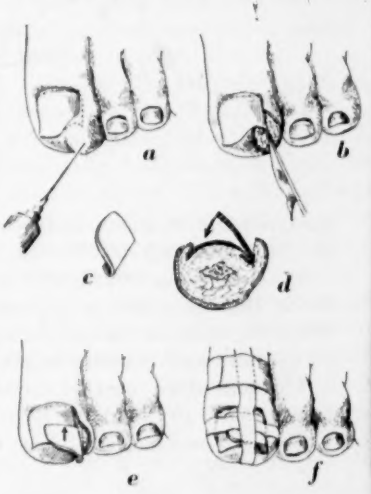


plate is left in place until the nail has grown out to the end of the sulcus, but can be removed and replaced with ease and without pain in three weeks.

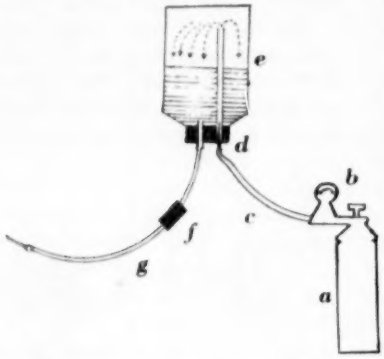
The patient should be instructed to cut nails straight across, not trim them back in the sulcus.

* A simplified treatment of ingrown toenail. Surg., Gynec. & Obst. 89:638-639, 1949.

Ultrarapid Blood Transfusion

VIRGINIA K. PIERCE, M.D., GUY F. ROBBINS, M.D., AND ALEXANDER BRUNSCHWIG, M.D.*

UNDER high pressure supplied by an oxygen tank, citrated blood may be injected at a rate of 500 cc. in one and a half to three minutes. The method is particularly advantageous in emergency treatment of many casualties. Although the intravenous route is employed by Virginia K. Pierce, M.D., and associates of Cornell University, the method is suitable for arterial infusion. The technic has been used with good results at the Memorial Hospital Center for Cancer and Allied Diseases, New York City, more than 100 times.



The apparatus is assembled from ordinary hospital equipment (see illustration). A small oxygen tank, *a*, with standard reduction valve and gas flowmeter, *b*, is attached by a connecting tube, *c*, with a 15-gauge needle, *d*, through an air vent into an inverted blood container, *e*.

Blood is administered with a drop filter assembly, *f*, through a sterile tubing, *g*, and a 15-gauge needle into the antecubital vein. When the valve on the oxygen tank is opened, blood flow is accelerated by downward pressure in the flask.

The procedure must be carried out by a physician. Great care is taken not to overload the heart and to avoid air embolism.

* Ultrarapid blood transfusion. Surg., Gynec. & Obst. 89:442-446, 1949.

HEMORRHAGIC SHOCK is rapidly overcome by a 6% gelatin solution. The substance is safer than potentially infected human plasma, believes Laurence B. Felmus, M.D., of Kings County Hospital, Brooklyn. Blood is drawn for typing; then, while laboratory results are awaited, the gelatin solution is given. Although fluid volume is maintained for two days after administration, whole blood is also required. In a series of 97 cases, blood pressure usually rose fifteen minutes after the injection started. The gelatin solution is contraindicated with heart or kidney disease.

Am. J. Surg. 78:374-378, 1949.

Safer Gastrectomy

L. A. Alesen, M.D., William F. Quinn, M.D., and Norman L. Cardey, M.D.*

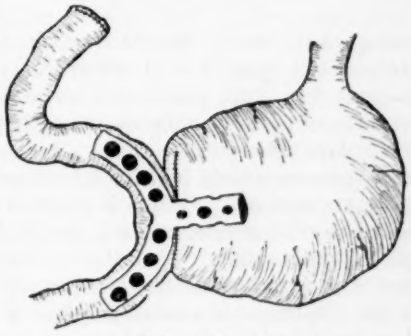
College of Medical Evangelists, Los Angeles

The most feared complication of gastrectomy, blowout of the duodenal stump causing fatal peritonitis, may be prevented by a wax T-tube inserted in the gastroenteric stoma.

Since the opening is kept patent through the T-tube, secretions cannot be obstructed by edema or kinks, and weakened tissues are not stretched to the breaking point. The tube disappears in about four days, and recovery is unusually smooth and rapid.

L. A. Alesen, M.D., William F. Quinn, M.D., and Norman L. Cardey, M.D., report use of the disintegrating tube in 100 consecutive cases, including 61 with large adherent chronic ulcers. No deaths and few complications occurred.

Without such a support, gastrectomy and anastomosis by the Billroth II modifications may be followed by swelling or angulation at the stoma. A daily volume of at least 1,500 cc. of fluids—biliary, pancreatic, and duodenal—accumulates and the duodenal stump finally gives way, no matter how secure the suturing may have been.



T-Tube in Position

The gastrectomy tube is made on the principle of timed enteric tablets and dissolving rings for intestinal anastomosis. Materials are stearic acid U.S.P., carnauba wax No. 1, white purified beeswax, petroleum jelly, powdered elm bark, and merthiolate 1:7,000. Barium sulfate is added for roentgen opacity.

Timing is controlled by the percentage of elm bark, which slowly absorbs water and expands. As the waxes are gradually split away, more moisture enters. The wall is strengthened by a thin strand of silk so that parts cannot break off before general disintegration.

The melting point is approximately 185° F. The tube is sterilized by soaking in zephiran chloride solution, 1:1,000 for fifteen minutes.

The device is particularly useful with high subtotal or almost complete gastrectomy, notoriously productive of angulation at the stoma. The procedures in which the T-tube may be included are an anterior or

* Safer gastrectomy: 100 consecutive cases without mortality. California Med. 71:187-189, 1949.

a posterior Polya, anterior-Hofmeister Polya, anterior Balfour-Hofmeister, and posterior gastroenterostomy with or without vagotomy.

When all suturing but the anterior line is completed, the T-tube is placed loosely in the gastrojejunal stoma (see illustration). No anchoring is necessary, since the shape of the tube maintains the position. Although the framework practically insures accurate anastomosis, tissues must be handled gently and edges carefully closed.

The artificial support exerts no pressure on the suture line or adjoining tissue and contains many fenestrations for drainage. The stoma is held open for the critical period of about ninety-six hours before the tube automatically disappears.

A Levine tube is inserted before the patient leaves the operating room. The next morning he is encouraged to drink water. The stomach is thoroughly irrigated, and accumulated mucus is withdrawn by constant suction.

At noon the Levine tube is removed and water, tea, and broth are given in small, slowly increased amounts. A soft diet is generally tolerated on the third and fourth days, and more solid food on the fifth day.

Pleural Decortication with Tuberculosis

JOSEPH WEINBERG, M.D., AND J. DWIGHT DAVIS, M.D.*

If a collapsed tuberculous lung fails to reexpand under ordinary treatment, the fibrotic pleura should be removed. Decortication is possible but more difficult with frank empyema and is less likely to succeed.

The operation is undertaken after acute tuberculous pneumonitis has subsided. As streptomycin is employed to prevent dissemination of infection, tubercle bacilli should not be drug-resistant from prior therapy.

Joseph Weinberg, M.D., and J. Dwight Davis, M.D., of the University of California, Los Angeles, and Birmingham Veterans Administration Hospital, Van Nuys, Calif., obliterated persistent pneumothorax cavities in 14 of 15 cases, using additional thoracoplasty in 4.

For five to seven days before decortication 1 gm. of streptomycin per day is injected intramuscularly, and for three days, 200,000 units of penicillin daily. An intercostal incision is made in the fifth interspace and extended to the posterior axillary line. A Finochietto rib spreader is employed and no ribs are divided or excised.

The membrane is separated from the costal wall and visceral surfaces, and from the diaphragm if a cleavage plane is obtained. Tissue is removed in one piece when possible.

* Pleural decortication in pulmonary tuberculosis. Am. Rev. Tuberc. 60:288-304, 1949.

Maternal Obesity

J. H. SHELDON, M.D.*
Royal Hospital, Wolverhampton, England

THE diabetic tendency of women who bear large babies has been commonly discussed, but the apparently related maternal obesity is still neglected.

Size and death rates of babies and hyperlactation and diabetes in mothers could result from increased anterior pituitary function, yet the obesity cannot be so easily explained.

A hypothalamic origin of the abnormal maternal weight gain is suggested by J. H. Sheldon, M.D.

Women may suddenly gain weight during pregnancy, usually between the fourth and sixth months, or immediately after delivery. A static phase ordinarily follows, but the excessive size continues indefinitely.

Weight rises, either with every pregnancy or after only 1 birth. In the latter case, the infant is usually a boy.

If the gain begins post partum, the woman may become too fat for her maternity garments before she is out of bed; others may require larger clothes every month for several months. In some cases, 4 to 5 lb. a week are added for seven to nine weeks.

The majority of women have generalized obesity with deposits of fat on the upper arms, breasts, abdomen, buttocks, and thighs.

In some few instances, however, the pelvis, buttocks, and legs are huge and the rest of the body is of ordinary size. Rarely, features characteristic of Cushing's syndrome are noted.

Occasionally a slow steady rise continues for many years. Half the women increase 75% in weight and some more than 100%. Only rarely does weight decline from the high level.

Heredity apparently influences the incidence, since obese women are twice as likely as other women to have had fat mothers. Many individuals who suddenly become exceedingly overweight during pregnany or after confinement were themselves large at birth.

Obesity of similar kind is produced in animals after damage to the hypothalamus. The underlying cause of the maternal obesity is probably a hypothalamic disturbance involving the regulatory function of weight control.

Disturbances of pregnancy are fairly frequent among the women who become obese; hyperemesis and toxemia occur in 10% of cases, three times the usual rate. Lactation is usually normal but in some cases may be excessive. Occasionally, the flow appears early in pregnancy, continues long after weaning, or goes on night and day without interruption. Menstruation, however, is ordinarily unaffected.

* Maternal obesity. Lancet 257:869-873, 1949.

Later in life, carbohydrate metabolism may be upset. Fasting blood sugar levels are over 120 mg. per 100 cc. and glucose tolerance curves exceed 200 mg. Approximately 1 woman in 20 eventually becomes frankly diabetic.

Babies of affected mothers are 3 times as likely to die before or immediately after birth as children of normal women, and large infants weighing 10 or 11 lb. at birth are more numerous in a ratio of approximately 4½ to 1.

Moreover, mothers of the large infants begin to gain weight during pregnancy, and weight rises with every gestation.

Thermometer for Ovulation Timing

EDWARD FRANCIS KEEFE, M.D.*

DAILY temperature changes must be noted with great precision by women recording ovarian activity. An open-scale mercury thermometer described by Edward Francis Keefe, M.D., of St. Vincent's Hospital, New York City, is more accurate and more easily read than the ordinary type.

The Ovulindex has 2 degrees F. per inch, all numbered, in contrast to 9 degrees per inch with only even numbers as is frequent. The range is uniformly from 96 to 100. Persons unable to use an ordinary fever thermometer are often able to keep useful records with the new instrument.

The thermometer is self-registering, with etched glass stem about 4 in. long. The bulb is relatively large and blunt, and tube bore small. Values are accurate within 0.1 degree F. and patients often learn to read, by interpolation, within 0.02 degree F.

Temperatures are taken orally or rectally under basal or standardized conditions. The maximum value is reached in three minutes although four should be allowed.

After eight hours of sleep the oral temperature at 7:30 A.M. is generally below 97.5° F. on days before ovulation and above 98° F. after ovulation. If temperature on waking in the morning is read an hour later than ordinarily recorded, 0.1° F. is subtracted for each half hour of delay.

The large-scale thermometer may be used in diagnosis of early pregnancy, in study of corpus luteum activity, and in management of threatened abortion. Since corrections at 97, 98, and 99° F. are available by serial number, the records obtained with the Ovulindex are dependable for research.

* A practical open-scale thermometer for timing human ovulation. New York State J. Med. 49:2554-2555, 1949.

Pathogenesis of Scoliosis

ALVIN M. ARKIN, M.D.*
Mount Sinai Hospital, New York City

CIRCUS horses trained early to lope habitually in one direction around a ring do not become scoliotic.

On the other hand, a young horse that constantly pulls a millstone around a circular track eventually has a permanent spinal curvature. These two examples partially explain the pathogenesis of scoliosis.

The horizontal spine of the horse is protected from gravity-induced stress when the animal moves unimpeded in a circle.

However, compression of the millhorse's spine into a collar substitutes effectively for gravitational stress and converts a habitual curve into a structural scoliosis.

Lateral curvature of the erect spine of human beings is produced by a great or small asymmetrical force aided by the downward pull of gravitational force.

During childhood, the epiphyseal growth may be arrested on one side, so that vertebrae become wedge-shaped. If curvature begins in adult life, after growth is complete, wedging does not occur.

Interrelated causes of scoliosis have been traced by Alvin M. Arkin, M.D. (see diagram).

In the chart, the line *B* separates scoliosis beginning before end of growth, shown on the left, from curvature starting after growth stops, as seen on the right. Scoliosis of adult vertebrae involves curvatures and postural abnormality without wedging.

The causes of scoliosis are represented at the far left. For instance, major asymmetry begins to affect a straight spine. As soon as the vertebral column curves, body weight during erect position exerts pressure with increasing intensity, illustrated by the broadening segment of gravity.

As the curve develops, the contribution of the asymmetric position diminishes, as indicated by converging lines.

Minor asymmetry also tends to become less influential.

The line *A* marks the exact degree of lateral deviation where combined pressures on the epiphyseal plate stop growth of bone. Thus *A* indicates the division between functional and structural curvature.

Factors that lower resistance of the epiphyseal plate to pressure will shift line *A* to the left, so that scoliosis can be produced by even a relatively slight departure from the vertical position.

With rickets or unfavorable heredity, for instance, poor posture in

* Scoliosis—a concept of its pathogenesis. J. Mt. Sinai Hosp. 16:200-202, 1949.

school hours only may cause actual wedging.

The force of poor posture affects one side, squeezes the intervertebral disks, and thus produces a temporary curve. The bone cannot be compressed.

However, epiphyseal growth may be partly or completely arrested in a direction corresponding to the distribution of force. When downward pressure is removed by putting the patient to bed, idiopathic scoliosis progresses no farther and in some cases the vertebral growth may be resumed.

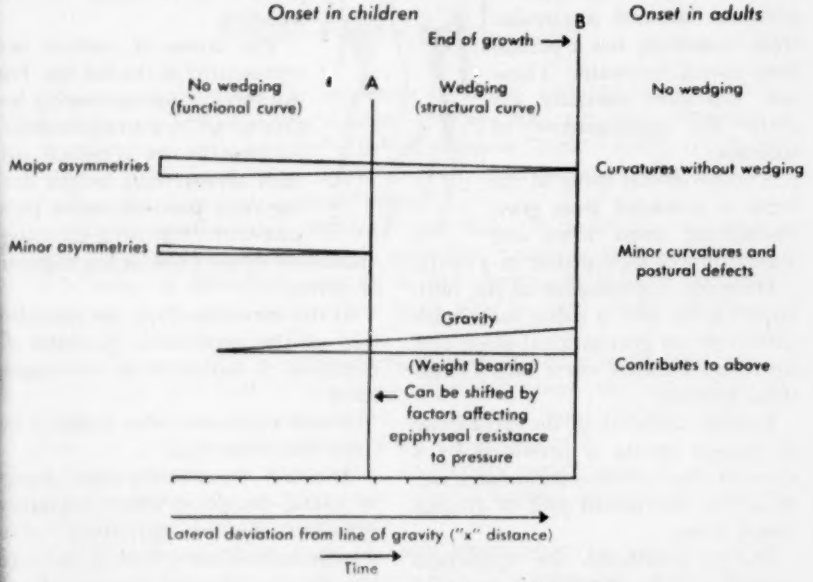
The asymmetrical forces producing functional curvature are of major or minor grade, depending on whether the effect of gravity is augmented to change bone structure.

Major asymmetry, such as the type of one-sided force that occurs after thoracoplasty, adds the bowstring pull of soft tissue to the downward push of body weight.

Tension alone may so arrest growth that curvature develops and progresses even in a recumbent period.

Minor asymmetry, commonly a postural deviation, is important only because the resulting curvature distributes gravitational stresses in lopsided manner. In these cases, the spine is actually bent only with the help of gravity and, if bone is not deformed, will straighten when the body is kept horizontal.

INTERRELATED CAUSES OF SCOLIOSIS



Treatment of Slipping Femoral Epiphysis

CLARENCE H. HEYMAN, M.D.*
Gates Hospital for Crippled Children, Elyria, Ohio

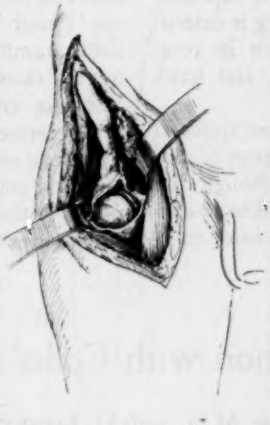
MANAGEMENT of a gradually slipping femoral epiphysis depends on the stage of deformity. Three procedures employed by Clarence H. Heyman, M.D., proved reliable for slight, moderate, and severe involvement.

During the early phase, when the displacement is negligible, the epiphysis should be fused by a bone graft across the plate. If external rotation and adduction are well advanced and displacement is still progressing, manipulation and a cast restore function and relieve pain without risk of necrosis. Cervical osteotomy is unsatisfactory.

Extreme deformity with the epiphysis already fused requires some form of osteoplasty. Motion is greatly improved by simple removal of a bony obstruction on the femoral neck.

Results of the different procedures were appraised in 42 cases two or more years after treatment, unless failure was noted sooner.

The patients, mostly boys, were ten to eighteen years of age. More than half were overweight, and some apparently had glandular dyscrasia. All had moderate or severe pain and limited motion. Symptoms had lasted two years in 2 cases, two to nine months in the remainder. Epiphyseal plates were still open when first observed.



Bone graft across the epiphyseal plate is an easier and more effective method of fusion than introduction of a Smith-Petersen nail. The anterosuperior aspect of the femur neck is exposed; the capsule is incised longitudinally and reflected to reveal the junction of head and neck.

A rectangular section of bony cortex, about 4 cm. long and 1 cm. wide, is removed in the long axis of the neck and laid aside. A small curet or gouge is forced through the gutter and across the epiphyseal plate into the center of the head.

Small pieces of cancellous bone from the crest of the ilium are packed into the hole. The section of cortex is driven in like a peg or replaced in the original site. The capsule is then sutured and the wound closed.

Light temporary traction is applied for six weeks, and crutches are used for a similar period. Weight-bearing is permitted in about three months, when fusion is complete or well under way.

In correction of moderately advanced displacement, vigorous manip-

* Treatment of slipping of the upper femoral epiphysis. Surg., Gynec. & Obst. 89:559-565, 1949.

ulation does not interfere with circulation of the femur head or damage the hip joint. Leadbetter's method of reducing fracture of the femur neck is carried out under anesthesia. Using considerable force when required, traction is applied with the hip flexed at a right angle. The leg is internally rotated, brought down in rotation and wide abduction, and fixed in a plaster spica.

The epiphysis fuses rather quickly, pain disappears, and the range of motion generally widens, although the relative positions of femoral head and neck may be unaltered. In some cases improvement is probably due to release of fibrous or muscular contraction.

In the residual stage of deformity, when fusion has already occurred, motion may be blocked by a bony prominence at the anteroposterior aspect of the femur neck impinging against the acetabular rim. The obstruction is merely chiseled off. After a week of bed rest, crutches are allowed.

Operative fusion produced good to excellent results with no failures in 10 cases, manipulation and cast in 17 of 21, osteoplasty in 3, and cervical osteotomy in 1 of 8.

Pin Fixation with Colles' Fracture

LESLIE V. RUSH, M.D., AND H. LOWRY RUSH, M.D.*
Rush Memorial Hospital, Meridian, Miss.

An important consideration in treating wrist fractures is the prevention of joint stiffness after the break is healed. For this reason, pin fixation, which allows immediate freedom of function, is particularly useful for old patients.

The operation does not require great skill, but Leslie V. Rush, M.D., and H. Lowry Rush, M.D., believe that a thorough understanding of the mechanics of the injury is essential.

A round pin is used, constructed of stainless steel with a hook head which grasps the cortex of the bone firmly but at the same time protrudes little into the soft tissues (see illustration).

For insertion, a stab wound is made in the skin about ¼ in. from the distal end of the radial styloid. The Cotton-Loder position is assumed. A drill opening is made in the cortex of the bone through the wound *(a)*. When the point has penetrated the cortex, the drill is rocked distally to make an oblique opening.

A longitudinal pin about 6 in. long and $\frac{3}{32}$ in. across is pushed through the cancellous bone *(b)*. When resistance is met, the pin is tapped gently with a mallet. The sled-runner point guides the pin down the medullary canal of the shaft of the axis. The hooked head grasps the cortex of the styloid *(c)*.

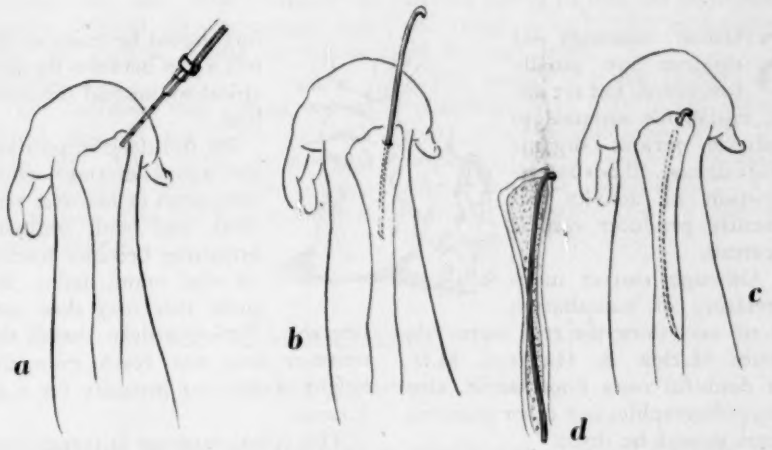
The skin is then sutured with one cotton stitch.

* Longitudinal pin fixation in Colles' fracture of the wrist. South. Surgeon 15:679-686, 1949.

The natural contours of the radial shaft usually hold the pin firmly in place with pressure at three points *(d)*. When the fixation is not completely secure, however, the wrist should be immobilized with plaster splints. These are removed occasionally to permit movement.

The wrist should be watched closely for loosening of the fixture. During the first few weeks some of the function of the wrist may be limited by soreness, but the fingers are not affected.

The procedure is probably indicated for any adult if the styloid fragment of the radius can be grasped satisfactorily by the head of the pin. Since children rarely have stiffness of joints after injury and crossing an epiphyseal line is unwise in young patients, pin fixation is not used.



PREMATURE INFANTS do as well on cow's milk preparations as they do on modified human breast milk. Although mixtures of human milk are nutritionally adequate, James W. Bruce, M.D., and associates, Louisville, Ky., assert that the important factor in growth is to let the baby proceed at his own rate on a formula he really likes. At the University of Louisville, various diets were given to four groups totaling 101 infants. On cow's milk preparations birth weight was regained sooner, daily weight gain was greater, and the hospital stay shorter.

J. Pediat. 35:201-206, 1949.

Functional Systolic Murmurs in Childhood

MARLOW B. HARRISON, M.D.*
Stanford University, San Francisco

SYSTOLIC murmurs of children are usually functional, but are often mistakenly assumed to indicate serious organic heart disease. Ill-advised restriction of activity frequently produces cardiac neurosis.

Although correct interpretation of auscultation alone may show the true status, declares Marlow B. Harrison, M.D., in doubtful cases fluoroscopic, electrocardiographic, and other examinations should be done.

Functional systolic murmurs have five major characteristics:

1] The site of maximal intensity may be any valvular area.

2] Intensity varies from faint to moderately loud.

3] Quality is soft and blowing, not rumbling, rough, or harsh.

4] Transmission is usually limited.

5] The murmur nearly always begins a short time after the first heart sound ends.

Functional systolic murmurs are slightly louder in recumbent than upright position, contrary to organic murmurs.

An apical systolic murmur is barely audible to moderately faint but never loud. The blowing quality may be a mere whiff.

Even with tachycardia, every effort should be made to detect a gap between the first apical sound and the murmur.

On full deep inspiration the apical murmur often disappears or becomes very faint, and with ordinary breathing becomes louder. As the sound fades, the pulse rate may slow considerably. During a deep breath the murmur does not reach even the height of reduced intensity for 2 or 3 beats.

The apical murmur is transmitted very short distances and seldom upward or backward. In upright position any spread is toward the axilla: with recumbency, slightly to upper left of the sternum.

A functional systolic murmur to the left of the sternum is less perplexing than the apical type. The sound may be louder but is never harsh, and the pitch is slightly higher. The murmur extends from third to fifth interspace, at times to the lower sternum, and is maximal at or near the fourth interspace.

Although the murmur begins after the first heart sound, the interval may be impossible to note by ear. The sound originates close to the chest wall and is seldom abolished by deep breathing. With supine position intensity may increase.

* Difficulties in evaluating systolic murmurs in children. California Med. 71:325-328, 1949.

Functional aortic murmurs are heard most clearly in the right second interspace, are faint to moderately loud, and occupy all or any part of systole. Intensity decreases toward the end. The murmur is hardly affected by respiration but may be slightly louder in supine position.

The murmurs may radiate to the apical area yet are higher in pitch than the true mitral form. The aortic second sound is often a little less intense than the first sound but always present.

Pulmonary systolic murmurs, the most common of all, are often moderately loud and resemble the aortic type except for site. Although murmurs may radiate down the left sternal border or into the aortic area, the range is fairly well circumscribed in most cases.

The sound is much louder with recumbency and with forced expiration, often disappearing with full inspiration. The second pulmonic sound may be reduplicated. The murmur is accentuated by exercise and decreased by rest.

Cerebral Concussion in Children

MAX T. SCHNITKER, M.D.*

A BLOW on a child's forehead or temple may cause an alarming reaction of vomiting, slight shock, and delayed stupor suggesting extradural hematoma, although no lesions are shown by complete neurologic examination or radiography of the skull.

Max T. Schnitker, M.D., of St. Vincent's Hospital, Toledo, Ohio, believes that symptoms arise from cerebral edema extending to the region of the diencephalon. The disorder requires no special treatment and never lasts more than twenty-four hours.

Concussion from minor accidents was observed in 11 children aged twenty-one months to eleven years. In most instances, the children fell while at play, striking their heads against the ground, trees, or other objects.

A momentary daze is generally followed by crying, nausea, and vomiting or headache with pallor, irritability, and slowing of the pulse. After a lucid interval lasting up to two hours, the child becomes more and more drowsy and is aroused with difficulty. Rarely, transient tetanic spasms or pupillary dilation may occur. White cell count and temperature seldom rise. Spinal fluid is clear and pressure normal.

The semicomatous state continues three to six hours, usually into the night. The patient arises the next morning, fully recovered. No sequelae occur.

* A syndrome of cerebral concussion in children. J. Pediat. 35:557-560. 1949.

Wheel Chairs

GEORGE G. DEAVER, M.D.*
New York University, New York City

A WHEEL chair must be adapted to the invalid's size and disability and also to the chief area of use, whether in the home, institution, or outdoors.

The best type of vehicle, says George G. Deaver, M.D., is collapsible and easily managed by the patient. The frame is light chromium-plated metal, the back and seat are fabric. Driving wheels are large and controlled by a brake.

Several stock models that may be modified are available. Head rest, desk arm, zippered back, and other special features may be provided. The chairs are neat, comfortable, easily maneuvered in a small space, and can be transported in a car.

Wheels—For outdoor use, the propelling wheels should be in the rear and have a diameter of 24 in. Diameter of the front wheels should be 8 in. Wheels of this size increase the chair length but are less likely to become caught in cracks than the standard 5-in. type. Tires may be solid rubber or pneumatic.

The indoor chair should be adapted to small rooms and crooked passageways. Large front wheels placed near the center permit a complete pivot. However, wheel position depends somewhat on the nature of disability. If trunk muscles are weak and the hand rims must be reached by leaning back rather than forward, driving wheels should be behind.

A special amputee chair compensates for loss of both legs. To balance the weight of the trunk, propelling wheels are in the rear and farther back than usual. Front casters are placed farther forward, and foot rests omitted.

In case of arm amputation or hemiplegia, a chair with a one-arm drive is employed. The drive wheel has two hand rims on the patient's good side. When both rims are turned with one hand the chair goes straight forward, and when one rim is moved separately the vehicle turns right or left.

Brakes—Every chair should have a hand brake to prevent rolling on an incline and allow the occupant to leave the chair unaided.

Back rest—To permit folding of the chair, the back rest is made of fabric. This may be slack or tight as desired. A separate head rest extension can be used with any frame. Back and head rests may be adjusted to all positions.

If a zipper is put in the back rest, the patient is able to slide from the chair to bed or toilet and return. When the fabric stretches and loosens, a removable wooden back is helpful.

Arm rests—Standard chairs have round metal arm rests, but during

* Wheel chairs. Physical Therap. Rev. 29:505-507, 1949.

long confinement more comfortable flat wooden or upholstered arms may be bolted on without increasing the overall width. A chair with detachable arms and 20-in. wheels can be entered and left from the side and can be brought near a table. Removable and permanent desk arms are available. A plywood tray can be obtained to fit over both chair arms.

Seat—The seat is usually 16 in. square and 20 in. from the floor but the dimensions can be varied to suit the invalid's size and prosthetic aids. An airfoam cushion supplies cool comfort and prevents dampness from perspiration.

Footboards and leg panels—Footboards are generally tilted up at the front edge. Size, height, and angle of leg rests are regulated. If knees cannot be flexed to a 90° angle, the calves are supported with adjustable panels. When the legs are spastic, toe loops and heel straps are fastened to footboards to hold the feet.

Prevention of Venous Thrombosis

VLADIMIR L. TICHY, M.D., AND H. T. ZANKEL, M.D.*

RHYTHMIC contraction of calf muscles by electric stimulation quickens the circulation and eliminates thrombosis. The method may be incorporated in almost all plans of surgical or medical therapy.

The critical period for thrombosis and emboli development in the legs is during surgical operation and the first few postoperative days, believe Vladimir L. Tichy, M.D., and H. T. Zankel, M.D., of Western Reserve University, Cleveland, who have used prophylactic electrical stimulation of surgical patients for about two years. Among 639 recent cases, no emboli and only 2 instances of thrombosis occurred, although 20 or more instances of thrombosis would have been expected under ordinary care.

As soon as possible after the patient returns from the operating room, a gauze-covered pad electrode measuring 4 by 5 in. and moistened with saline solution is fastened to each calf with an elastic bandage. Each electrode is connected by cord and clips to a sinusoidal machine and the current adjusted to induce muscular contraction, usually about 4 or 5 milliamperes.

Stimulation is continued at the rate of 22 contractures per minute for one-half hour. This performance is repeated every alternate one-half hour for twenty-four hours, or until active voluntary movement is possible.

A machine with an automatic timing device may be used.

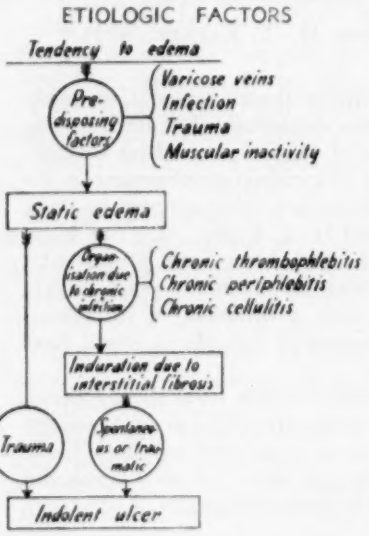
* Prevention of venous thrombosis and embolism by electrical stimulation of calf muscles. Arch. Phys. Med. 30:711-715, 1949.

Ambulatory Treatment for Indolent Leg Ulcer

P. BAUWENS, M.D.*
St. Thomas Hospital, London

WOUNDS and ulcers which in any other part of the body would probably heal rapidly often fail to do so when occurring in the legs. These indolent ulcers sometimes appear to be a price man pays for the privilege of walking erect.

Although often labeled "varicose ulcers" the lesions are not invariably



a concomitant of varicosity. In every case, however, either persistent edema or induration is found to be a factor.

Tendency to edema always exists in the dependent parts of the body and is aggravated by reflex mechanisms initiated by trauma, infection, muscular activity, and varicose veins (see chart). If the edema can be decreased by recumbency, the ulcer may be healed by a prolonged stay in bed. Reappearance of the ulcer is likely, however, if edema occurs when the patient gets up and resumes activity.

Ambulatory treatment is far more satisfactory but requires a great deal of time and patience. P. Bauwens, M.D., reports complete healing in 110 of 125 patients treated on an ambulatory basis.

Fundamentals of ambulatory treatment are dissolution of induration, both deep and superficial, and control of edema. Patients are taught to carry out the treatment at home. Visits are made to the physician periodically for a checkup examination and to receive deep massage, ultraviolet ray therapy, and zinc ionization.

Induration is broken down by deep kneading of the ulcer bed. Edema is controlled by centripetal massage with the leg elevated and by application of elastic webbing. Accessory treatment consists of active movements to restore and retain mobility at all joints.

Elastic webbing is applied to pro-

* Ulceration of the legs: treatment by the Bisgaard method. Brit. J. Phys. Med. 12:122-123, 1949.

duce pressure on the appropriate points and to effect a form of massage during walking. Special attention is given to parts requiring additional pressure such as the grooves behind and below the malleoli and the edges and base of the ulcers.

Even after the ulcers have healed, predisposing factors may still be present. Patients should be impressed with the possible necessity of persevering for a considerable time with the deep kneading and the wearing of the pressure bandage. Later the pressure bandage may be replaced by an elastic stocking.

Useful prescriptions for topical application are:

1] Aluminum acetate..... 2%
Boric acid..... 0.3%
Distilled water to..... 100%

2] Menthol..... 2%
Zinc ointment to..... 100%

Endoscopic Thoracic Sympathectomy

ERHARD KUX, M.D., AUSTRIA*

THE thoracic sympathetic chain may be readily interrupted from the inner chest wall, using a thoracoscope and one or two openings.

No sedation or general anesthesia is required. Nerves may be injected or divided by cautery at any point above the diaphragm, or exeresis can be done and portions below the diaphragm evulsed. Some 200 operations were performed by this approach without complication except for 3 instances of intercostal neuralgia.

The method, explains Erhard Kux, M.D., of University of Innsbruck, Austria, is adaptable for treatment of hypertension, diseases of the liver and biliary tract, pancreas, spleen, and hemopoietic system, circulatory disorders, bronchial asthma, and pulmonary tuberculosis and may be used instead of vagotomy for peptic ulcer.

After induction of pneumothorax the entire sympathetic trunk may be visualized through the lighted endoscope from the caudal portion of the stellate ganglion to the diaphragm, including branches to the splanchnics and the rami communicantes. Details appear in relief because of shadow contrast.

The upper half of the vagus can be reached with a direct optic and cautery, the lower half with a 90° or 135° optic and a curved cautery.

Endoscopic possibilities have been overlooked because in customary views detail is concealed.

* The transpleural endoscopic approach to the autonomic nervous system and its therapeutic possibilities. Dis. of Chest 16:625-626, 1949.

Management of Convulsive Disorders

J. A. Resch, M.D., and Abe B. Baker, M.D.*
University of Minnesota, Minneapolis

Epilepsy is not a disease entity but is objective evidence of excessive neuronal discharge in gray matter of the brain. Manifestations may be principally motor, sensory, visceral, or psychic.

Most satisfactory medication, according to J. A. Resch, M.D., and Abe B. Baker, M.D., is a barbiturate and hydantoin. Fatigue, toxicity, nervous strain, and other irritants should be eliminated as far as possible, alcoholic drinks forbidden, and all fluids restricted.

Some 650,000 persons in the United States, or about 1 in 200, are subject to convulsive disorders. So-called idiopathic cases are numerous because attacks often start many years after the original cause.

Onset before the age of two years is generally due to brain damage at birth or congenital deterioration. Seizures in a child two to ten years old may result from natal cerebral injury, febrile thrombosis, trauma, or some unknown factor. Epilepsy in later life usually arises from trauma, neoplasm, or arteriosclerosis.

The pattern of seizures often indicates the site by reflecting function of the overactive region. Generalized convulsions, which may be the end state of any other form, arise from the entire motor cortex. A masticatory attack of chewing and swallowing starts in the postcentral gyrus; turning of eyes, head, and body in the frontal lobe; and opisthotonos in the brain stem.

Somatic sensory seizures may be corporeal, visual, auditory, vertiginous, olfactory, vascular, or pilomotor. Visceral disturbances may be sensory or motor or both.

Among psychic disturbances are dreamlike hallucinations, stereotyped thinking or behavior, and petit mal, or short periods of unconsciousness. Psychosis, usually due to severe or constant attacks, may result in irresponsible and very dangerous acts.

The most useful diagnostic test is encephalography, which usually shows true epilepsy, often the focus for the seizures, and excludes hysteria. Radiography of the skull indicates congenital defects, calcification, and shift of the pineal gland. Pneumoencephalograms are made when neoplasm or cyst is suspected, ventriculograms if intracranial pressure is increased.

A spinal puncture may show lues, neoplasm, and other abnormalities. Since convulsions may result from hypoglycemia, a six-hour glucose tolerance test should be done.

Simple psychotherapy such as reassurance, explanation, and ventilation may relieve anxiety and other mental disturbances.

School or regular employment is desirable. Except for the use of some kinds of machinery and motor ve-

* The management of convulsive disorders. J. Iowa M. Soc. 39:505-506, 1949.

hicles, activity is seldom restricted. However, carbon monoxide and other occupational toxins should be avoided. The patient may be referred to a local chapter of the American Epilepsy League.

The diet must be adequate, regular, and well balanced. Because an overhydrated brain is more susceptible to stimuli, fluids are limited to 1,000 cc. per day.

The general aim of drug therapy is control of seizures with the least possible toxicity. A combination of barbiturate and hydantoin provides synergistic action with relatively small dosage of each drug.

Mebaral, a brand of mephobarbital, produces few undesirable reactions even in large doses. A combination of Mebaral and Dilantin is often most efficacious.

The latter, diphenylhydantoin sodium, is frequently taken for years without untoward result. However, severe ataxia may develop rather suddenly. Other possible effects include tremor, dizziness, restlessness, skin and gastrointestinal disorders, and hypertrophy of the gums.

Mesantoin has side reactions like those of Dilantin and occasionally produces blood dyscrasia or fever with adenopathy. Tridione may occasionally precipitate seizures and, rarely, cause aplastic anemia. With this drug, blood studies should be made every two weeks and a drug controlling major seizures be given concomitantly.

Dosage and time of administration vary. Amounts must sometimes be changed during menstruation, fever, emotional turmoil, or other stress.

TESTS FOR MULTIPLE SCLEROSIS helpful in differential diagnosis are appearance, total and differential cell count, total protein determination, quantitative colloidal gold reaction, and quantitative complement fixation tests in both blood and spinal fluids. None is specific, but Theodore J. C. von Storch, M.D., Albert H. Harris, M.D., and Tiffany Lawyer, Jr., M.D., of the Albany Medical College, Albany, N.Y., feel that the quantitative gold reaction is of considerable value. In 100 clinically proved cases of multiple sclerosis, colloidal gold curves were abnormal in 93.

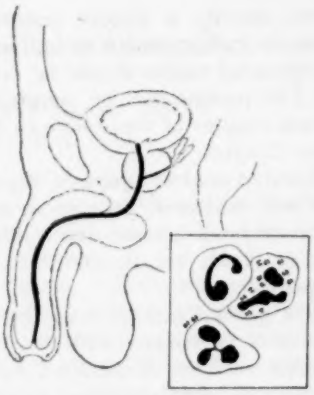
New York State J. Med. 49:2145-2148, 1949.

THEPHORIN FOR PARALYSIS AGITANS may reduce tremor, rigidity, and pain, with benefit to speech, gait, and facial expression. F. M. Berger, M.D., University of Rochester, Rochester, N.Y., gives 25 to 50 mg. two to four times daily after meals, starting with 25 mg. three times daily. With or without scopolamine about half the cases improve, both idiopathic and postencephalitic. In addition to antihistaminic and atropine-like actions, the drug seems to affect the mechanism responsible for paralysis.

New York State J. Med. 49:1817-1820, 1949.

Persistent Urethral Discharge

SOLOMON KEESAL, M.D.*
Philadelphia General Hospital



FROM 3 to 5% of gonococcal and nonspecific urethral inflammations resist the usual treatment with sulfonamide, penicillin, and streptomycin, alone or combined, and continue to produce a discharge.

Several possible reasons are cited by Solomon Keesal, M.D: subacute urethritis, subacute or chronic prostatitis, a small meatus, bizarre hypospadial opening, tight prepuce, infection of the upper urinary tract, chancre, foreign bodies, overtreatment, urethral stricture, and occasionally *Trichomonas vaginalis* infection.

Subacute urethritis is recognized by drainage continuing five to seven days after presumably adequate medication with penicillin and sulfanilimide. In the 2-glass urine test, the first sample is hazy and contains shreds, indicating anterior involvement. If the posterior urethra is affected the second sample is cloudy.

Organisms should be sought in cultures and smears and their tolerance to drugs determined. In some cases large doses are successful, especially for gonorrhea. Drainage may result from too much sulfonamide and penicillin with formation of irritating crystals.

Since the glands of Littre are often inflamed and obstructed, a large urethral sound should be passed to stretch the urethra and dilate the ostia. Small purulent pockets may be palpated over the instrument and pus removed by massage.

If manipulation fails, potassium permanganate is applied daily to the anterior urethra with a Valentine tipped irrigator. The column head should be 1½ ft. above the symphysis pubis and 1.5 to 2 pt. of fluid employed, a little at a time.

The patient then instills a 5% solution of silver proteinate daily with an anterior urethral syringe of 0.25-oz. capacity, and holds the fluid for at least five minutes.

The most probable cause of a morning discharge is *urethral stricture* at the bulbomembranous junction. After failure of drugs, the urethra should be calibrated with a bougie à boule and the narrow portion dilated. The discharge may then disappear or lessen sufficiently for medication to be effective.

Subacute or chronic prostatitis also may produce a regular morning dis-

* The persistent urethral discharge: causes and management following therapeutic failures with chemotherapeutic and antibiotic agents. Am. Pract. 4:124-130, 1949.

charge. At least two weeks after cure of a primary subacute anterior inflammation, and three or four weeks after an acute attack, secretions are expressed by light massage. Prostatic involvement is shown by a count of more than 6 white cells per dry, high-power field. Lecithin cells are decreased or absent.

If organisms are found on culture, penicillin or sulfonamide may be helpful. Prostatitis requires digital massage every five to seven days, with increasing pressure as the pain subsides.

Meatal stenosis results from chronic inflammation and fibrosis. If a discharge continues after dilatation of the small meatus with a No. 26 or 28 French sound, meatotomy should be done after local anesthesia.

Until the tissues heal the urethra should be kept open by dilatation, and any obstructive partition formed by new tissue resected.

A *small hypospadiac opening* may be found just beneath the glans or proximally up to the perineum. A wedge of tissue is removed from the meatus, edges of urethral mucosa are sewn to the skin, and the urethra dilated every other day to prevent stricture formation.

A *tight prepuce* may cause a foul, irritating discharge. If urethritis can be disproved by the 2-glass test, the prepuce should be cleaned regularly and thoroughly. A collar of gauze is then placed just behind the corona and the foreskin drawn down. A dorsal slit may be necessary.

Erosive gangrenous inflammation may be reduced by 4% maphərsen in glycerin, zinc peroxide paste, tyrothricin ointment, or penicillin ointment. When inflammation is gone, circumcision should be done.

Chronic cystourethritis may be due to tuberculosis or other serious infection of the upper urinary tract. Guinea pig inoculation and culture are done, as well as intravenous urography, retrograde pyelography, and cystoscopy.

Urethral chancre is likely if sulfonamides have not cleared the inflammation and penicillin was not tried. The urethra may be slightly indurated and superficial inguinal nodes palpable. When possible, material from the chancre and from inguinal nodes is examined by darkfield.

Foreign bodies introduced into the urethra may be discovered by radiography or palpation of the corpus spongiosum. Objects are removed directly by forceps, pushed into the bladder and retrieved through the rectoscope sheath, or obtained by open operation.

Injudicious treatment with instruments or drugs may perpetuate a discharge. Since the urethral mucosa is very sensitive, all probing, massage, and irrigation should be done gently and with utmost care not to cause further damage.

Urethral drainage may result from *Trichomonas vaginalis* infection of the prostate and seminal vesicles. The discharge commonly begins a day or two after exposure. The anterior urethra is irritated, the meatus slightly inflamed, the fluid milky, and motile organisms are found in urine voided after prostatic examination.

The gland should be massaged. Irrigation may be done with 1:3,000 Zephiran solution, Ravinol dextrose solution, or calcium mandelate.

Special Exhibit

Are You Asking for a Lawsuit?

Adapted from an exhibit, "Prevention of Malpractice Suits," displayed at the American Medical Association meeting at Atlantic City. The exhibit was produced and arranged by Louis J. Regan, M.D., LL.B., legal counsel of the Los Angeles Medical Association.

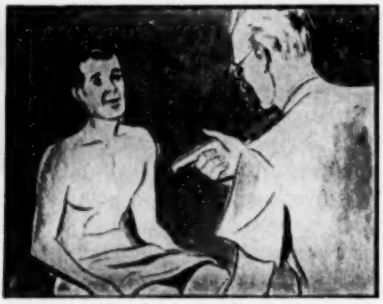
Do not criticize work or results of another practitioner unless you have all the facts!

Doctor: "Somebody has given you a bad x-ray burn!"

Experience proves that it is unwise to leave the patient unattended during labor!

Doctor: "You won't deliver for hours. I'll be back after awhile."

The standard of practice in the community must be met in diagnosis as in therapy.



Doctor: "We don't need any smear . . . that's gonorrhea all right!"

Immunize!

Doctor: "No, I won't give any T.A.T. It might make the child sick!"

No elective pelvic surgery unless patient of childbearing age is *proved* not pregnant!

Doctor: "It's a fibroid . . . must operate! No, of course we don't need a pregnancy test!"

There must not be delay in diagnosis of cancer!

Doctor: "We'll just watch that little mass in the breast and see what happens."

Do not promise too much!

Doctor: "I'll guarantee that you'll be 100% okay!"

Exercise care in the selection of assistants and in the delegation of duties to them!

Doctor: "Nurse, give me an ounce of 10% argyrol for a bladder instillation."

Whenever a patient presents real or suspected bone or joint injury, require an x-ray!

Doctor: "No, we don't need an x-ray!"

Dr. Regan's original exhibit was organized into three sections:

- Asking for a Suit
- Malpractice, General Principles
- Consent to Operation

The first section is reproduced in this Special Exhibit; adaptations of the other two sections will appear regularly in the department of Forensic Medicine for the next several issues.—Ed.

Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-159

THE CLUE

ATTENDING M.D: I want you to see a patient who has just come into the hospital. The man is in his early fifties. This morning, while driving to work, he noticed a transient numbness in his right arm and right foot. This disappeared when he pulled to the side of the road and sat quietly for about five minutes. However, he saw his physician

who, in view of the fact that the patient complained of a little dizziness, sent him to the hospital. Examination was completely negative except for a slightly elevated blood pressure, 170/100.

VISITING M.D: Neurologic examination as I go over him now is entirely negative. Please get the routine laboratory and x-ray studies, including electroencephalogram and x-ray film of the skull.

ATTENDING M.D: Shall we let him be up and about or leave him flat in bed?

VISITING M.D: I would favor letting him be ambulatory. His blood pressure is the same as when the home doctor took it. Let's give him some theophylline and phenobarbital, but I would suspect that a severe drop in blood pressure, associated with absolute bed rest, might cause further intracranial vascular changes.

PART II

ATTENDING M.D: *(7 a.m., calling Visiting M.D. on the phone)* Doctor, your patient had a stroke in the night. He was awakened by a strange sensation, got up around 1 o'clock this morning, tried to get to the bathroom, and fell. I find all the neurologic evidence of right hemiplegia, including right facial palsy and hyperreflexia. There is no Babinski on that side, and he does not have aphasia, although his speech is slow.

VISITING M.D: I'll be right over.

ATTENDING M.D: *(One hour later)* The neurologic signs have largely disappeared, and the reports of the routine laboratory work, including electroencephalography and x-rays,

are all within normal limits. Prothrombin time is 100%.

VISITING M.D: We had better start dicumarol at once. I believe this is a cerebrovascular accident, probably thrombosis. The transient nature of the hemiplegia suggests, of course, that it was not a hemorrhage. *(The two doctors walk down the hall and into the physicians' room. While they are sitting there, the nurse enters and says that the patient has had another stroke.)*

PART III

(The doctors examine the patient. They find extreme rigidity and flexion of both arms, and rigidity and spasticity with extension of the legs. There is hyperreflexia, but still no Babinski phenomena. The left pupil is larger than the right, and the patient is unconscious, with stertorous and gurgling respiration. He is placed in an oxygen tent.)

VISITING M.D: I believe that the patient has had a hemorrhage in the left side of the brain, either as a second lesion or as an extension of an earlier thrombosis, with vascular changes and resultant anoxemia. It is a serious question whether any form of treatment can now change the course. It was a mistake, I believe, that we did not begin dicumarol therapy at once. We will interrupt the dicumarol with parenteral vitamin K. I don't feel that stellate ganglion block is indicated.

PART IV

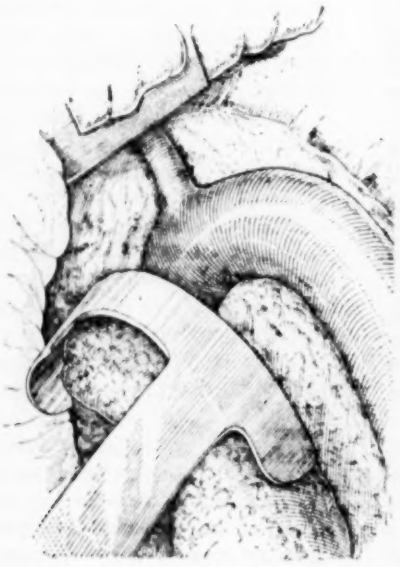
VISITING M.D: *(Next day)* The patient is still alive. I see you have put him in an oxygen tent and given him a blood transfusion. This is good supportive treatment, but I don't believe that anything we can do will alter the course of events. I find him neurologically unchanged, except that both pupils are now small. There is no stiff neck or bruit over the head, and no localizing neurologic signs have yet appeared. He is in a state of almost decerebrate rigidity. It would seem to me now, considering the small pupils and sudden onset of what is almost a quadriplegia, that the patient has had an involvement of the brain stem—perhaps a thrombosis of the basilar artery. I note in information obtained from the man's family that he has been an extensive and voracious eater of eggs for many years. This is sometimes concomitant with atherosclerosis. It would seem, in retrospect, that the patient suffered a small vascular thrombosis when we first saw him, a second one shortly afterward, then a third with occlusion of the brain stem. It is unlikely that the present situation is the result of a supratentorial lesion, although I must admit that the large pupil on one side influenced me in favor of such a diagnosis at the very start. *(A period of six hours passes, during which the patient expires. An autopsy is performed.)*

PATHOLOGIST: There is thrombosis of the left middle cerebral artery, and thrombosis of the basilar artery, with occlusion and infarction of the pons.

VISITING M.D. An extremely interesting and instructive case. It raises a number of questions in the treatment of cerebrovascular accidents that are most difficult to answer.

For instance, do we dare give heparin and dicumarol when we first see a patient with what we believe is a cerebrovascular accident? Since a small amount of hemorrhage is often found post mortem associated with thrombosis, it would take considerable courage to do this. On the other hand, from the autopsy findings, with no gross hemorrhage visible, such a course of therapy might have prolonged this patient's life for a period of time. Perhaps we should have given him heparin at once, and continued with dicumarol indefinitely. Whether the man should have been confined to bed is another question. Lowering the blood pressure, if that is the cause of the thrombosis, might be efficacious, but contrarily, complete bed rest might lead to thrombosis. In this case the man's severe vascular accident occurred in the middle of the night when he was completely at rest. Finally, this case emphasizes one's futility and frustration when faced with a patient who has had a cerebrovascular accident. We could argue the possibility that a stellate ganglion block bilaterally, intravenous histamine, or the like might have been of value, but I think under the circumstances a discussion of these contingencies is purely academic.

ATTENDING M.D: All considerations of the case aside, I must confess to a little secret satisfaction in finding that once in a while you, too, miss and don't get every case exactly on the button!



Retractor for Esophageal Surgery

J.-H. RESANO, M.D.*
Buenos Aires

A HATCHET-SHAPED retractor is useful in performance of esophagogastric anastomosis. The instrument described by J.-H. Resano, M.D., of Buenos Aires, is made of malleable metal and is used to draw the lung posteriorly into the mediastinum for exposure of the supra-aortic triangle of Poirier (see illustration).

When the anastomosis must be made with both pleural cavities open, as for double pneumothorax, the retractor is especially valuable.

* Ecarteur pour la chirurgie de l'œsophage. Presse méd. 59:829, 1949.

Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Tonsils, Adenoids, and Allergy*

TO THE EDITORS: I am in agreement with most of the points raised in Dr. Norman W. Clein's paper on tonsils, adenoids, and allergy. However, I don't believe that the recurring adenoid and tonsillar tissue is caused by extrinsic allergy alone, that is, foods or inhalants.

In my opinion, the recurrence is due to bacterial allergy from recurrent infection in the respiratory tract either alone or in combination with food or inhalant sensitization. I feel that the bacterial component as well as the extrinsic factor must be treated before a successful result can be achieved.

JOSEPH HARKAVY, M.D.
New York City

► TO THE EDITORS: Coexistence of hyperplastic nasopharyngeal lymphoid tissue and chronic nasal allergy has been repeatedly observed, and the relationship appears to be now well confirmed.

It is interesting to note that, in patients with uncomplicated hay fever per se, such hyperplastic tissue is rarely observed. This may be explained by spontaneous subsidence of the inflammatory process early enough to prevent the development of lymphatic hyperplasia.

The lymphoid response is a secondary manifestation of chronic inflammation wherever it occurs. When this inflammation of the nasopharyngeal mucosa—either of bacterial, allergic, or combined origin—persists long enough, lymphoid hyperplasia appears along the channels of lymphatic drainage and is often observed as granular hyperplastic areas studding the posterior pharyngeal wall. This characteristic granular appearance of the posterior nasopharyngeal wall is frequently observed in patients with uncontrolled chronic nasal allergy. On the other hand, patients with properly controlled chronic nasal allergy often show a tendency to spontaneous involution of the hyperplastic areas.

When tonsillectomy and adenoidectomy have been performed on the controlled nasal allergic patient, the tendency to recurrence of this tissue is greatly reduced. Contrariwise, a tonsillectomy and adenoidectomy on a patient with uncontrolled chronic nasal allergy will frequently produce recurrence of lymphoid tissue.

It may be appropriate to caution once more against elective nose and throat surgery during the hay fever season on a patient with hay fever.

*MODERN MEDICINE, Nov. 15, 1949, p. 81.

It should also be emphasized that in patients with respiratory allergy, tonsillectomy and adenoidectomy should not be performed with the assumption that the operations will eradicate the underlying nasal allergy. However, such surgery must be undertaken in properly selected cases at the opportune time.

Occasionally, removal of the adenoids alone in patients under competent allergic management is effective in improving nasal ventilation, drainage, and respiration.

MAYER A. GREEN, M.D.
Pittsburgh

► TO THE EDITORS: The problem of whether allergy explains the recurrence of adenoid and tonsil tissue is still one of clinical observation. However, I feel that I have observed a sufficient number of patients to come to the following conclusions:

1] Removal of the tonsils and adenoids in allergic patients usually results in hypertrophy of the remaining lymphoid tissue of Waldeyer's ring.

2] Removal of the adenoids and tonsils has no beneficial effect on allergic symptoms.

3] The date of the onset of many allergic complaints in children is frequently given as "right after the tonsils and adenoids were removed."

4] Radiation therapy for lymphoid hyperplasia in an allergic child has no beneficial effect on allergic symptoms.

5] The indications for adenotonsillectomy in the allergic child are the same as in the nonallergic.

TOWNSEND B. FRIEDMAN, M.D.
Chicago

► TO THE EDITORS: "Is allergy the explanation of recurrence of adenoid and tonsil tissues?" I have attempted to answer this question as objectively as possible by reviewing lateral roentgenograms of the nasopharynx of children ages four to fifteen years. These plates very clearly visualize the extent of adenoid tissue present.

The evaluation of the total amount of adenoid tissue was made by Drs. Diane Dusinsky and G. Newton Scatchard of the Radiology Department of the Children's Hospital of Buffalo. Adenoid tissue at this hospital is treated by x-ray therapy. Radium application to the nasopharynx was previously used for shrinking adenoid tisue, but the higher dosage of radiation attained by x-ray therapy was found to be more effective.

Of course, a study in which cases were selected and skin tests done would be a preferable method but would take too long a time for inclusion in your Forum.

We based our groups for this study on the purpose for which the child was sent for the x-ray picture.

Group I—*Children sent for roentgenograms of pituitary gland hypertrophy:* 10 cases, average age 9.5 years. One case only had appreciable hypertrophy of the adenoid tissues (10%).

Group II—*Allergic children, indicated both by symptoms and skin testing:* 7 cases, average age 8.3 years. Appreciable hypertrophy of the adenoid tissue in 4 cases (57%). All children with adenoid hypertrophy had adenoidectomy and tonsillectomy from 1 to 5 years before the x-ray therapy (average 3.7 years).

Group III—*Children referred for nasal symptoms and/or deafness (Many of these patients were allergic but were never treated or studied in this respect):*

6 cases, average age 7.3 years. Appreciable hypertrophy of the adenoid tissue in 5 cases (83%). All children in this group had tonsillectomy from 1 to 6 years before x-ray therapy (average 3.2 years).

The obvious conclusions from this small amount of data are: [1] Adenoids recur in allergic children at least 5 times as often as in nonallergic children. [2] Adenoids hypertrophy 5 times as often in allergic as in nonallergic children.

In regard to tonsillar hyperplasia, we have not noted recurrence of tonsillar tissue to the extent of requiring treatment following a careful tonsillectomy in very many of our cases.

VICTOR L. COHEN, M.D.

Buffalo

Effect of Hormones on Rheumatoid Arthritis*

TO THE EDITORS: The discovery by Drs. Philip S. Hench, Edward C. Kendall, Charles H. Slocumb, and Howard F. Polley of hormones that have an ameliorating effect on rheumatoid arthritis may well be one of the most important of this era.

This finding opens the door to a whole series of investigations that should greatly increase our understanding of many different types of arthritis and allied conditions. However, a word of caution seems advisable because of the increasing publicity in the press, giving the erroneous impression that this is a "cure" for rheumatoid arthritis, and thereby raising many false hopes.

From the reports presented to date the following points are to be noted:

1] These hormones apparently reduce the symptoms and swellings in the early stages (grades 1 and 2), but it is too early yet to know the effect on joints already destroyed (grades 3 and 4).

2] Daily injections are required to maintain the desired effects.

3] No one as yet knows the end results or possible complications resulting from the long-continued use of these hormones.

4] The scarcity of these preparations probably means that little will be available for the general practitioner for several years, by which time one may expect many modifications.

To emphasize these points I quote from the original report, "The rarity of these compounds presently and in the immediate future, and the limited scope of our preliminary data (especially regarding prolonged administration) make inappropriate now the use of the term 'treatment' except in an investigative sense."

Thus, if the authors themselves do not claim these hormones to be even a form of treatment for rheumatoid arthritis at present, the publicity heralding a "cure" seems premature.

In the meantime it is most important that we continue to treat patients with rheumatoid arthritis by the best means available, using a balanced program of both general and local care and protecting the patients from deformities.

The remarkable discovery of Hench and his fellow workers should stimulate renewed interest everywhere in the whole subject.

G. DOUGLAS TAYLOR, M.D.

Toronto

*MODERN MEDICINE, May 15, 1949, p. 39.

Surgical Esophageal Lesions*

TO THE EDITORS: I want to congratulate you on your recent symposium on gastrointestinal diseases (Oct. 15, 1949). All the articles in the issue are interesting.

In his remarks about achalasia, or cardiospasm, Dr. Alton Ochsner says, "Most cases of achalasia can be improved by conservative means, consisting of psychotherapy and repeated dilatations, but for many, a radical procedure is necessary." It has been my experience that psychotherapy can be effective only in the first three months. Later, the reflex is a conditioned one and cannot be influenced by psychotherapy.

Simple dilatation with a bougie of any kind, including mercury bougie, causes only temporary relief and is usually unsatisfactory. In many cases, the so-called "brusque" dilatation effects a complete cure. It is definitely an operative procedure, although no blood is spilled. It is done, for instance, by the Mayo Clinic and by Dr. Vinson with the so-called Plummer balloon.

I, myself, prefer an umbrella-like metal dilator. These instruments tear the muscles apart beneath the mucosa.

If this procedure succeeds, the patient is completely cured at once. Recurrences are very rare. The morbidity is slight, and mortality seems to be nil.

No patients in any kind of medical practice are more grateful or show such exuberant joy as those cured of cardiospasm. Of 50 patients, I could not cure 3. These are the ones in whom a surgical procedure was indicated. Anyone who knows the fine results that are possible is shocked to see patients who may have suffered for ten or twenty years without the proper management.

RUDOLF SCHINDLER, M.D.

Chicago

*MODERN MEDICINE, Oct. 15, 1949, p. 60.

Surgery for Intussusception*

TO THE EDITORS: I have used the Mikulicz exteriorization method of dealing with irreducible intussusception at the ileocecal valve in children several times, as described by Drs. Robert E. Gross and Paul F. Ware.

I have also employed this procedure for adults with obstructing carcinoma at the ileocecal valve and ascending colon.

All exteriorization procedures are dirty and slow but they are life saving.

The general practitioner should be warned not to wait until an abdominal tumor can be felt before making a diagnosis. Delay in operation has resulted in several fatalities in my experience.

A tumor is rarely felt in the early reducible stage of this serious condition. Sudden paroxysm of intestinal pain with vomiting and bloody stool in a previously healthy child that is not relieved by gastric lavage and simple enema within a few hours should be explored.

In this condition, early diagnosis and early reduction are the two factors that lower mortality and morbidity.

G. H. STOBIE, M.D.

Belleville, Ont.

*MODERN MEDICINE, Feb. 1, 1949, p. 62.

Myxedema Heart*

TO THE EDITORS: The question as to the cause of enlarged heart with myxedema cannot be definitely answered for all cases.

In the first place, not all patients with myxedema present the clinical picture of atonic globular enlargement of the heart with or without symptoms and signs of myocardial failure.

In the second place, it is probable that the enlargement as visualized may be due to either cardiac enlargement with myocardial changes, as described by Bell, pericardial effusion, or both.

Fundamentally, of course, the condition producing this picture is a metabolic disturbance effected by the absence of the normal thyroid products which are necessary for normal tissue metabolism.

Opportunities for answering this question are rare for the following two reasons:

1] The underlying myxedema, of which the cardiac involvement is only one of many forms, is usually recognized clinically, treatment is well known and effective, and pathologic study is not available.

2] Autopsies on patients with unrecognized myxedema are probably infrequent and, when such autopsies are performed, nature of the heart changes may be missed. This probably explains the dearth of pathologic reports on the subject.

The valuable report of Dr. Richard A. Kern will doubtless stimulate clinicians to verify his conclusions, which are eminently sound. It will also stimulate the pathologist to more careful search for thyroid involvement when unexplained pericarditis and cardiac enlargement are found.

JOSEPH F. BORG, M.D.

St. Paul

*MODERN MEDICINE, Nov. 1, 1949, p. 52.

Gastric Suction after Cesarean Delivery*

TO THE EDITORS: I noted with interest the two letters in the Medical Forum of *Modern Medicine,* one favoring, the other opposing our use of gastric suction routinely in infants delivered by cesarean section (Nov. 15, 1949, p. 94).

I feel that the method should be used routinely for the following reasons:

Dependent drainage does not empty the infant's stomach completely and should be followed by stomach suction to eliminate the possibility of regurgitation of stomach contents with subsequent aspiration into the lungs and the development of delayed respiratory difficulty.

Suction, if used at all, must be routine, since there is no way of knowing which infants have a large volume of gastric contents and which infants may regurgitate. I have no evidence to date that gastric suction is traumatic.

Finally, it might be proposed that gastric suction be carried out in all infants regardless of the mode of delivery. In our hands it has aided in the prompt diagnosis of atresia of the esophagus and has suggested the diagnosis of atresia of the small bowel when stomach contents of over 50 cc. have been obtained.

SYDNEY S. GELLIS, M.D.

Boston

*MODERN MEDICINE, July 15, 1949, p. 64.

Mechanism of the Dumping Syndrome*

TO THE EDITORS: In an article on the mechanism of the postgastrectomy dumping syndrome, Dr. Thomas E. Machella attributes the early postprandial symptoms to jejunal distention. This explanation was offered in 1913 by Arthur F. Hertz *(Ann. Surg.* 58:466), who was the first to publish an account of this syndrome in persons with gastroenterostomies. Since that time, many papers have appeared which have attributed the symptoms to changes in blood sugar concentration, hyper- or hypoactivity of the vagus nerves, autonomic imbalance, irritation or inflammation of the jejunum or its mesentery, and psychoneurosis.

Of the many published reports concerning the etiology of the early postprandial symptoms, few are based on sound investigational studies. The data presented by Dr. Machella indicate a well-organized attempt to elucidate the problem and to evaluate some of the older concepts which have no sound basis. Dr. Machella, as well as others, has shown that hyperglycemia is not responsible for the symptoms. He also confirms observations that the symptoms may occur in people who have "complete" vagotomy. By ruling out other causes and by showing that jejunal distention is accompanied by symptoms similar, in most respects, to those accompanied by or immediately following a meal in susceptible persons, he has confirmed the concept that jejunal distention is a part of the mechanism of the early postprandial dumping syndrome.

Dr. Machella's original contribution to the etiology of the dumping syndrome is that, following a meal, symptoms occur only if there is sufficient distention of the jejunum, and that this degree of distention may occur only if the gastric contents which are discharged into the jejunum are sufficiently hypertonic to create an osmotic pressure great enough to draw fluid from the jejunum into its lumen. This added volume of diluting fluid is necessary to cause enough jejunal distention to produce symptoms. The data presented by Dr. Machella support this concept.

Atropine sulfate in adequate dosage is capable of preventing or partially suppressing the symptoms. The mechanism involved is not known. It would be of interest to know if atropine acts by diminishing associated intestinal responses to jejunal distention. Does it act by inhibiting intestinal tone, motility, or reversed peristalsis, and does atropine suppress the quantity of fluid which is transferred via the jejunal mucosa into the jejunal contents? Also, it would be of interest to know if persons with sympathectomy experience the dumping syndrome.

ARTHUR M. SCHOEN, M.D.
Philadelphia

► TO THE EDITORS: I have perused the literature seeking the answer to what causes the dumping syndrome, and have found a number of conflicting ideas upon the subject.

It is my opinion that similar syndromes occur in certain people who have not had gastrectomies. The above fact, together with the fact

*MODERN MEDICINE, Oct. 15, 1949, p. 62

1/2 cc.

Improved Cutter Pediatric Toxoids, Alhydrox* or plain, are now more highly purified. Increased potency reduces the dosage volume one-half, and gives the same high immunities you have always obtained with Cutter Toxoids. Write for immunization schedule. Cutter Laboratories, Berkeley, Calif.

* *Trade name for Aluminum Hydroxide adsorption, exclusive with Cutter. Alhydrox, added to proven, potent biologicals, results in a solid immunity and less pain on injection.*

that the dumping syndrome is too often observed after gastrectomy, leads me to believe that there is a definite cause and effect relationship between them aside from the psychologic status of the patient.

Since the dumping syndrome, however, does not occur in all persons or even in all who have had gastrectomies, it is my impression that the syndrome occurs in individuals who have a similar type of physiologic response to the ingestion of food. Some authors have said that a thorough evaluation of the patients before operation will indicate which ones are likely to develop the dumping syndrome. I believe that there is a great deal of truth in the latter concept, but that the reason is physiologic rather than psychologic.

Many of the patients who develop the dumping syndrome following gastrectomy subsequently overcome the postprandial symptoms, indicating physiologic readjustment.

We have been unable to do any work to study the physiologic aspects of this problem. I am impressed with Dr. Thomas E. Machella's findings that simple jejunal distention by a balloon produces dumping reactions.

GILBERT O. DEAN, M.D.
Little Rock, Ark.

► TO THE EDITORS: That there is a symptom complex which has been named "the dumping syndrome" there can be little doubt. This symptomatology has been well pointed out by Eusterman and Balfour, also by Snell. Other writers have reported the so-called "dumping syndrome" in 5.6% of their cases.

In our recent study of 100 postoperative subtotal gastrectomies there was no case of a symptom complex typical of the dumping syndrome. One patient in the series developed symptoms somewhat similar to the dumping syndrome three hours after a meal.

In this study a three-hour sugar tolerance test was done. We found a hyperglycemic state existed during the first half hour, after which there was a tendency to fall to a hypoglycemic state. The average normal at the end of the three-hour phase was 65 milligrams per cent. Our one patient who had suggested symptoms described as dumping syndrome fell within the normal limits of the curve.

Our personal feeling is that hypoglycemia does not play any part in the symptomatology of dumping syndrome. Each of the 100 patients had a gastric x-ray with a stop-watch check at the time the stomach started to empty and at the time of complete emptying. The initial emptying time for 70% of the patients was between one and five seconds, with the average final emptying time for 90% being sixty minutes. The amount of material used in this study was 300 cc. of barium sulfate suspension.

Our feeling regarding this syndrome is, first, that it is poorly named. We believe "dumping syndrome" does not adequately describe the etiologic factor of the condition. We would suggest as a more descriptive term "the jejunal osmotic complex." We believe that Dr. Machella's suggestion of the symptomatology being due to hypertonic solutions is indeed well founded and that chemical os-

(Continued on page 116)

poise . . .

. . . in women, is usually a synthesis of both physiological and psychological equilibrium.

The ability of TYREE's Antiseptic Powder to restore physiological equilibrium or to overcome many common pathological conditions stresses the value of professionally recommending this ethically promoted douche powder.

The detergent action of TYREE's Antiseptic Powder assures thorough cleansing in routine hygiene and its cooling essential oils afford a soothing sense of relief to delicate membranes. In pathological conditions, this powerful but gentle antiseptic easily destroys most ordinary intruders. In either situation, TYREE's low pH helps restore and maintain the normal protective acidity of the healthy vagina.

For your next patient who needs effective non-irritating therapy, prescribe TYREE's Antiseptic Powder. Write today for a *free* professional sample.

FORMULA:
MENTHOL
THYMOL
EUCALYPTOL
PHENOL
BORIC ACID
SALICYLIC ACID
ZINC SULFATE (Dry)

TYREE'S ANTISEPTIC POWDER

In bottles of 2 ozs. 4 ozs. 8 ozs.

J. S. TYREE, CHEMIST, INC.
15th and H Streets, N.E., Washington 2, D. C.
Makers of CYSTODYNE, a Urinary Antiseptic

Less Tax on Time, Patience and Ingenuity

• **1** In 97% of chronic ulcerative colitis patients, evidence of the disease may be seen through the proctoscope.[1]

• **2** The field disclosed through the proctosigmoidoscope is the mucosa of the lower bowel.

• **3** The field of Nisulfazole is the lower bowel. The Suspension is placed in the rectum and sigmoid to act against the infection and inflammation.

These three facts account for the all-out satisfaction of patients with Nisulfazole, which, to the physician, is but a part of his multiple approach to the therapy of chronic ulcerative colitis.

A narrowly specialized sulfonamide, Nisulfazole acts locally; does not appreciably enter the blood stream.

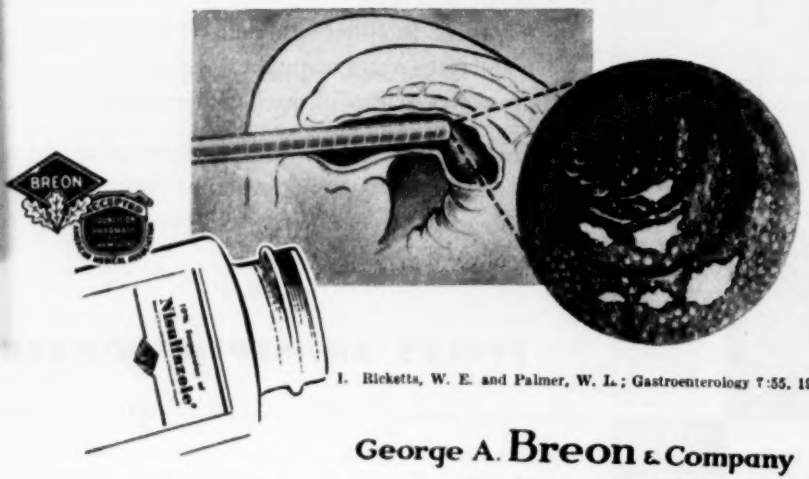
The physician's time, patience, and ingenuity are less taxed by unruly ulcerative colitis when he prescribes

Nisulfazole®

10% Suspension

(Brand of PARANITROSULFATHIAZOLE)

in bottles of 296 cc (10 fl. oz.)

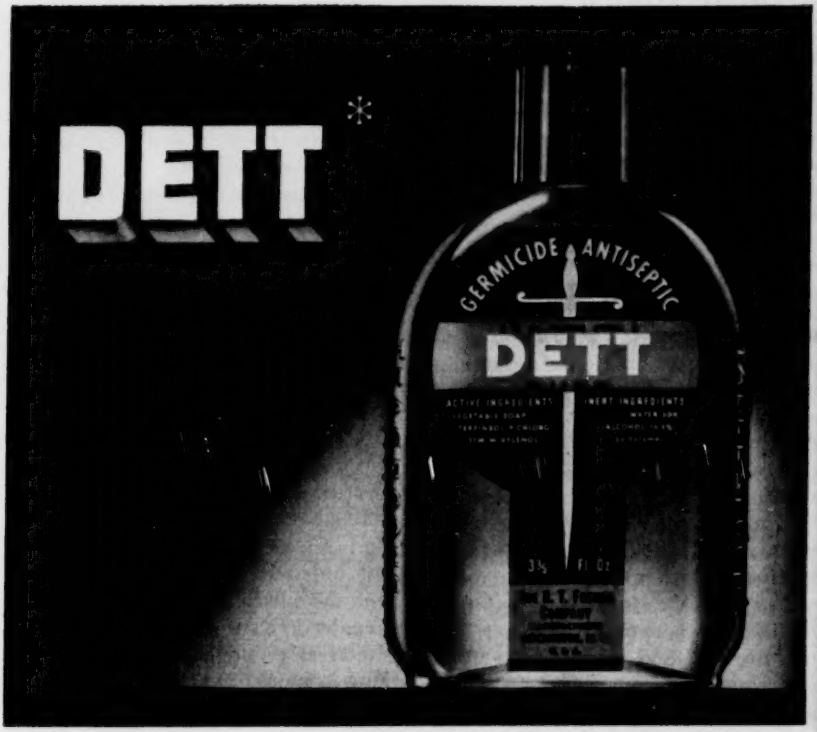


1. Ricketts, W. E. and Palmer, W. L.; Gastroenterology 7:55, 1946.

George A. Breon & Company

KANSAS CITY, MISSOURI

RENSSELAER, N. Y.
ATLANTA
SAN FRANCISCO



*ALSO KNOWN AS DETTOL

A "new" Antiseptic proved by 20 years performance

New to the medical profession of the United States, Dett, under the name Dettol, is standard equipment for surgeons and hospitals throughout the British Empire. Dett, for obstetrical and surgical use, has been proved since 1929.

Dett, although deadly to germs, is gentle to human tissue. This clean, clear liquid with an agreeable odor is safe, effective, non-irritating and non-staining. Physicians who have used Dettol in other countries will welcome its introduction in the United States under the name of Dett.

For a generous size sample, and literature, write to: The R. T. French Co., Pharmaceutical Department, Rochester 9, New York.

DETT *THE MODERN WEAPON AGAINST INFECTION*

mosis plays a far more important part than the rapid filling of the jejunum from the stomach. We believe that a very important postoperative instruction to the patient is to eat slowly, chew food well, and never overeat at any time.

GILSON COLBY ENGEL, M.D.
Philadelphia

► TO THE EDITORS: I read Dr. Thomas E. Machella's article on the dumping syndrome after gastrectomy with a great deal of interest. It is a very definite contribution to our information with regard to this particular syndrome.

Certainly, in our experience, the symptoms of this condition apparently arise from a too rapid distention of the jejunum after the ingestion of food. The conception that hypertonic mixtures of food may likewise be a factor seems to me to be a distinct advance. Certainly these symptoms are seen less when the Hofmeister procedure or a modification of it is used in the gastric resection.

W. L. ESTES, JR., M.D.
Bethlehem, Pa.

Curare and Exercise for Poliomyelitis*

TO THE EDITORS: I cannot let Dr. Alfred L. Florman's letter on the use of curare in the treatment of acute poliomyelitis go unanswered (Oct. 1, 1949, p. 92).

Unfortunately, Dr. Florman does not understand why curare is used in the treatment of acute poliomyelitis. As he states, it has no antiviral activity nor is it used for that purpose. On the other hand, while he states that it *might* be expected to reduce muscle spasm, the fact is, it positively reduces muscle spasm as a result of its pharmacologic action.

Dr. Florman is apparently unaware of the electromyographic work which has been done in poliomyelitis. This has demonstrated that almost all the muscles in a patient with acute anterior poliomyelitis are in spasm as shown by their electrical irritability. Under the circumstances, therefore, the fact that curare affects all the muscles is not harmful in any way.

Moreover, the fact that curare temporarily paralyzes the badly involved muscles as well as their antagonists is of no concern because its effect lasts only a few hours during which time the physical therapy technician is enabled to stretch the patient with greater ease and less pain. Although there is some slight theoretic evidence of a cumulative effect, this should play no part in its use in the treatment of poliomyelitis when the doses are regulated according to either Dr. Ransohoff's or Dr. Paul's technic.

It is unfortunate that there has been such a great misunderstanding of the value of curare in the treatment of acute and subacute poliomyelitis. It has one purpose, and only one: to relax or temporarily partially paralyze the muscles and thus enable the physical therapy technicians to stretch intensively without hurting the patient. When this is accomplished by technicians who know the technic, fixed deformities can be completely prevented and braces are for all practical purposes unnecessary.

VICTOR RAISMAN, M.D.
Richmond Hill, N.Y.

*MODERN MEDICINE, Aug. 1, 1949, p. 69.

'Beminal'

For versatile "B" therapy

The **'Beminal'** family provides a choice of five distinctive forms and potencies for the effective treatment of vitamin 'B' deficiencies. Each is designed to fill a particular need.

1. **'Beminal'** fortified with Iron, Liver and Folic Acid Capsule No. 821 is suggested for the treatment of iron deficiency anemias, certain macrocytic anemias and as adjunctive therapy in pernicious anemia.
2. **'Beminal'** with Iron and Liver Capsule No. 816 is recommended for the treatment of the various types of iron deficiency, occurring either as frank hypochromic microcytic anemia or as the less pronounced anemia of nutritional origin.
3. **'Beminal'** Forte with Vitamin C Capsule No. 817 is suggested when there is severe depletion of the patient's nutritional stores due to either prolonged dietary inadequacy or nutritive failure as a result of organic disease.
4. **'Beminal'** Forte Injectable (Dried) No. 495 provides, when reconstituted, a high concentration of important vitamin B factors for intensive therapy.
5. **'Beminal'** Tablets No. 815 may be of value if the vitamin B complex deficiency is mild or subclinical.

Ayerst, McKenna & Harrison *Limited*
22 East 40th Street, New York 16, N. Y.

'Beminal' *for* **'B'** *therapy*

4910

Short Reports

ANESTHESIOLOGY

Hexylcaine Hydrochloride for Block Anesthesia

Small doses of hexylcaine hydrochloride are apparently effective for spinal anesthesia and for regional local blocks. The drug was compared with procaine hydrochloride by Drs. J. Eugene Ruben and Elizabeth Anderson of the Philadelphia General Hospital, in a study of 200 operations in which one or the other agent was employed. The effective dose of hexylcaine, between 15 and 50 mg., was usually about one-third that required with procaine, and the anesthesia was apparently more complete and longer lasting. A 50-mg. ampule of crystalline hexylcaine hydrochloride is dissolved in 2 cc. of 10% glucose. The glucose is added to weight the anesthesia and control the level. The desired dose is drawn into the syringe and diluted with enough spinal fluid to lower the glucose concentration to from 5 to 7% in the mixture. Injection is made subdurally in the second, third, or fourth lumbar interspace, depending on the necessary level of anesthesia. A total volume of 4 cc. is usually required for surgery above the umbilicus, and 1 to 3 cc. below this level. Even for gallbladder and stomach operations, 50 mg. of hexylcaine hydrochloride is sufficient for an effective single-dose spinal anesthetic.

Am. J. Surg. 78:843-846, 1949.

NUTRITION

Lipemia and Atherosclerosis

Large numbers of fat particles circulate constantly in the blood of persons over fifty years of age and may be responsible for atherosclerosis. When elderly subjects are given a standard fat meal, chylomicron counts reach a peak after eight to twelve hours and continue high for nearly twenty-four hours, in contrast to a three-hour peak and five-hour duration with young persons. Dr. G. H. Becker and associates of Michael Reese Hospital, Chicago, find that the lipemic trend may be reversed by giving lipase or a detergent with the fat meal.

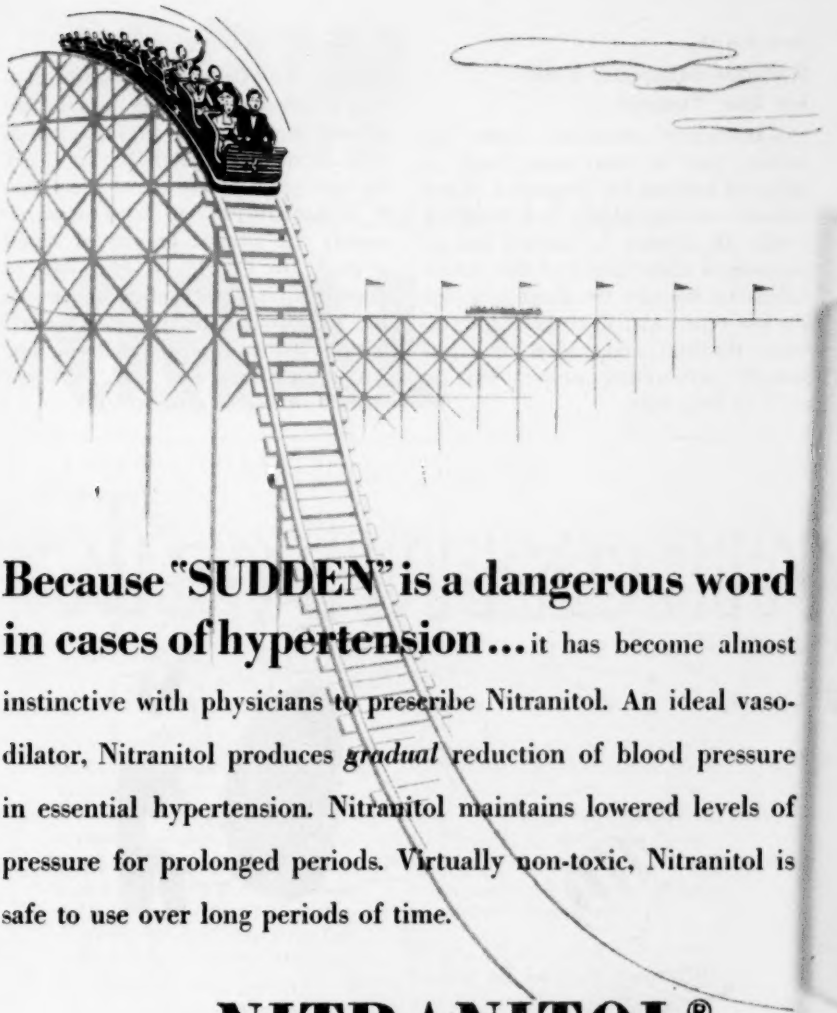
Science 110:529-530, 1949.

GENETICS

Sex Factor in Peptic Ulcer

After the age of fourteen, males are much more likely to die of peptic ulcer than are females. Before puberty, the ratio of boys' to girls' deaths from peptic ulcer is proportionate to that from other diseases. However, from fifteen to nineteen years of age, the ratio of male to female deaths increases to nearly 3 to 1 and, between the ages of thirty and sixty, to approximately 6 to 1. These conclusions were drawn from the mortality statistics of the United States, Great Britain, Sweden, and Switzerland by Drs. A. C. Ivy and Clement G. Martin of the University of Illinois, Chicago.

Gastroenterology 13:215-221, 1949.



Because "SUDDEN" is a dangerous word in cases of hypertension... it has become almost instinctive with physicians to prescribe Nitranitol. An ideal vasodilator, Nitranitol produces *gradual* reduction of blood pressure in essential hypertension. Nitranitol maintains lowered levels of pressure for prolonged periods. Virtually non-toxic, Nitranitol is safe to use over long periods of time.

NITRANITOL®

For gradual, prolonged, safe vasodilation

Merrell
1828
CINCINNATI · U S A

When sedation is desired. *Nitranitol with Phenobarbital.* (¼ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin.* (Combiner Rutin 20 mg. with above formula.)

OPHTHALMOLOGY

Radium Substitute Used for Eye Tumors

Radioactive strontium from the atomic pile is now being used in place of radium for treatment of eye tumors, corneal ulcers, and conjunctivitis. Dr. Hymer L. Friedell and associates of Cleveland find the chemical useful because the short beta rays do not reach and damage deeper tissues. Radium and radon emit the deeply penetrating gamma rays as well as beta rays.

EXPERIMENTAL SURGERY

Plastic Valvular Prostheses

A prosthetic valve has been inserted into the thoracic aortas of 20 dogs with no deaths attributable to either the operation or failure of the valve. A hollow lucite ball with approximately the specific gravity of blood is used. Dr. Charles A. Hufnagel of Harvard University, Boston, inserts the prosthesis into the great vessels with a multiple point fixation. The valve functions well and does not cause clotting or erosion.

"It's nothing to worry about. Jimmy's just got a slight attack of geography testitis today."

NOW

in the Control of Edema

ORAL

Mercurial Diuretic

tablets MERCUHYDRIN

with Ascorbic Acid

One to two tablets daily will permit maintenance of patients at optimal or "dry" weight. *Tablets* MERCUHYDRIN *with Ascorbic Acid* combat the pathologic retention of water-binding sodium which imposes a mounting fluid burden on the failing heart. Effective and usually well-tolerated, they are of special value in treatment of ambulatory patients.

MERCUHYDRIN mobilizes water and sodium from inundated tissues and fosters their urinary excretion. Oral maintenance therapy . . . *Tablets* MERCUHYDRIN *with Ascorbic Acid* . . . supplements the parenteral mercurial and diminishes the number of injections required to maintain the edema-free state.

Tablets MERCUHYDRIN *with Ascorbic Acid:* Bottles of 100. Each tablet contains meralluride 60 mg. and ascorbic acid 100 mg.

Lakeside Laboratories, INC.

MILWAUKEE 1, WISCONSIN

EXPERIMENTAL MEDICINE

Prevention of Infection after Frostbite

Sulfamylon hydrochloride is more potent than penicillin against infection with *Pseudomonas aeruginosa*. At Randolph Air Base, San Antonio, comparative studies were made of rabbits with experimental frostbite treated with penicillin ointment and 3% sulfamylon ointment. *Pseudomonas* infection developed in 30 of 78 animals treated with penicillin and in 4 of 212 with sulfamylon, report Drs. Josef Pichotka and R. B. Lewis.

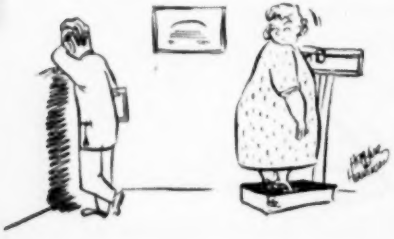
Proc. Soc. Exper. Biol. & Med. 72:127-130, 1949.

SURGERY

Resuscitation of Small Bowel

Viability of obstructed intestinal loops is shown by circulation on the antemesenteric border. If arterioles in the serosa are red and pulsating, the blood supply is adequate and the doubtful loop may be replaced without fear of perforation. With this criterion Dr. Bernard J. Ficarra of St. Francis College, Brooklyn, has encountered no complications, even after blue-black discoloration, edema, and absence of peristalsis.

Arch. Surg. 59:1135-1138, 1949.



EXPERIMENTAL SURGERY

Time Factor in Arterial Injuries

Although anastomosis of severed major arteries in the extremities should be performed as early as possible, such injuries can apparently be successfully repaired even when the limb has been ischemic beyond the generally accepted time limit of six to eight hours. Drs. Harry H. Miller and C. Stuart Welch of Tufts College, Boston, found a 90% leg survival in dogs after periods of ischemia of 1 to 6 hours, 50% after 12 to 18 hours, and 20% after 24 or more hours. The experimental ischemia was more severe than that usually encountered in human injuries. When more than twelve hours intervened between the injury and operation, the leg usually retained some degree of disability, ordinarily from contracture or atrophy.

Ann. Surg. 130:428-438, 1949.

EXPERIMENTAL SURGERY

Thyroid Regeneration

After subtotal thyroidectomy, the function of the residual tissue apparently increases in an attempt to maintain thyroid balance. Dr. Robert Johansen and associates of the University of California, San Francisco, find that three weeks after operations on albino rabbits the remaining thyroid tissue increases 66% in weight; twelve weeks later the glands weigh almost twice as much as immediately after the operations. The uptake of radioactive iodine is less direct after subtotal thyroidectomy, but improves in the following weeks as the gland regenerates, and approaches preoperative levels after twelve weeks.

Hosp. Cont. Clin. Cong. A.C.S., 1949.

This was your idea

When we asked a number of physicians what kind of a prescription form would best suit their purpose when managing an infant's dietary, there were four principal points on which most of them agreed. They wanted:

1. A guide for quick reference in balancing formula ingredients.
2. Ready information on solid foods additions to the diet.
3. Plenty of blank space for the special instructions so often needed for each individual case.
4. Clear, easily understood instructions for mothers on how to prepare and safeguard the formula, printed on the back of each prescription form.

These features are incorporated in the Pet Formula Selector and Solid Food Guide. It is compact, for your desk or pocket. It has a self-contained, replaceable pad of prescription forms. We have one for you. It is another Pet Service to Physicians.

PET MILK COMPANY
1484-A Arcade Building, St. Louis 1, Missouri

Please send me, without charge, the Formula Selector and Solid Food Guide.

_____ *M. D.*

Address _____

City _____ *Zone* ____ *State* _____

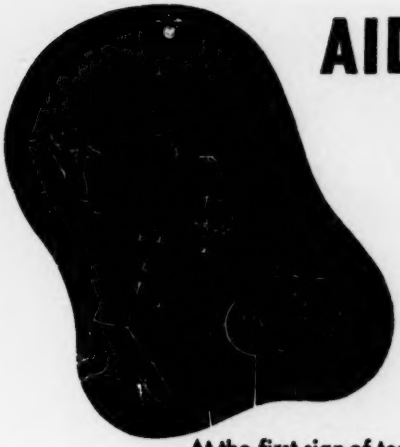
(Offer limited to physicians in United States and possessions)

DIAGNOSIS

Upper Abdominal Pain

Disorders of the biliary tract, pancreas, lower esophagus, and upper intestine may produce pain so identical that location of the disturbance on the basis of sensation alone is impossible. Dr. William P. Chapman and associates of Harvard University, Boston, asked 9 subjects convalescing from explorations of the common duct to compare pain from disease with experimentally produced effects; 7 had biliary tract disease and 2 had pancreatitis. The cardiac end of the esophagus, the common duct, the duodenum, or jejunum was distended by air inflation from a balloon or rapidly filled with water from a catheter. The patient was then asked to describe the location involved and type of pain as well as compare the sensation with that from his known disease. Distention of the common duct and upper small intestine produced the same pain in 7 patients. When the lower esophagus was included, distention of all three viscera caused identical sensations in only 3 patients. Distention of the common duct and upper small intestine reproduced the clinical pain for 7 patients; distention of the lower esophagus for 3.

Surg., Gynec. & Obst. 89:573-582, 1949.



AID in Dealing with an Important Pathological Factor of Our Time

At the first sign of tension, excessive nervous irritability, or emotional instability, mild sedation with NEVROTOSE* No. 3 is effective in relieving the patient's distressing symptoms while more fundamental treatment is explored.

NEVROTOSE No. 3

TRADEMARK

presents a carefully balanced combination of non-narcotic ingredients, each of which exerts a soothing sedative effect in minimum doses.

Each capsutab contains:

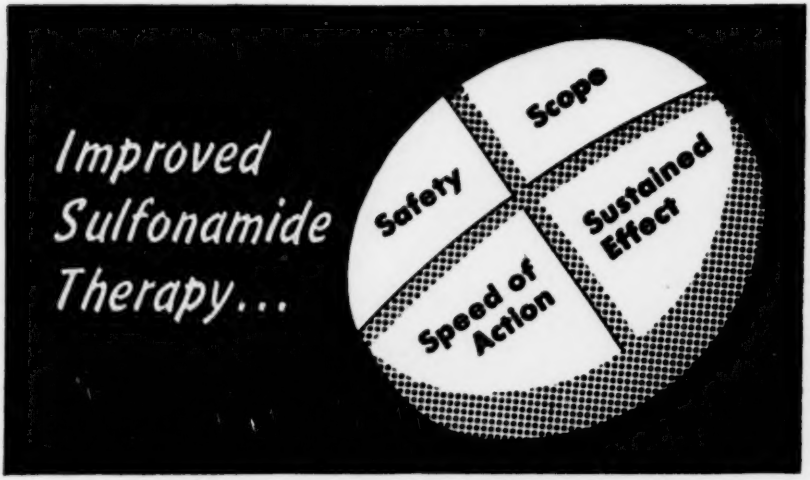
Phenobarbital	½ gr.
(Warning: May be habit-forming)	
Ext. Hyoscyamus	¼ gr.
(Represents 0.00038 grain total alkaloids of hyoscyamus leaf)	
Ext. Valerian	¼ gr.
Camphor Monobromated	⅛ gr.
Ext. Passiflora	¼ gr.

INDICATED in neurasthenia, hysteria, insomnia, and other nervous conditions characterized by restlessness and hyperexcitability; also, after excessive indulgence in stimulants.

SUPPLIED: Bottles of 100 and 1,000 yellow capsutabs.

*Trademark of The Vale Chemical Co., Inc.

THE VALE CHEMICAL CO., INC.
Pharmaceuticals
ALLENTOWN . . . PENNSYLVANIA



DIAMERZINE

TRADEMARK

(BRAND OF SULFADIAZINE-SULFAMERAZINE COMBINED)

By presenting two of the most effective sulfonamide agents in a single dosage form, DIAMERZINE* tablets (quadrisected) offer definite advantages over single-sulfonamide therapy. Adequate antibacterial scope is provided, while smaller amounts of each drug may be given without diminution of total sulfonamide potency. Since the solubility of each drug is virtually unaffected by the presence of the other, the danger of crystalluria, concrement formation, and toxic reactions is greatly reduced. Sustained blood levels are rapidly secured.

Each quadrisected DIAMERZINE tablet contains:

Sulfadiazine.....0.25 Gm. (3.85 gr.)
Sulfamerazine.....0.25 Gm. (3.85 gr.)

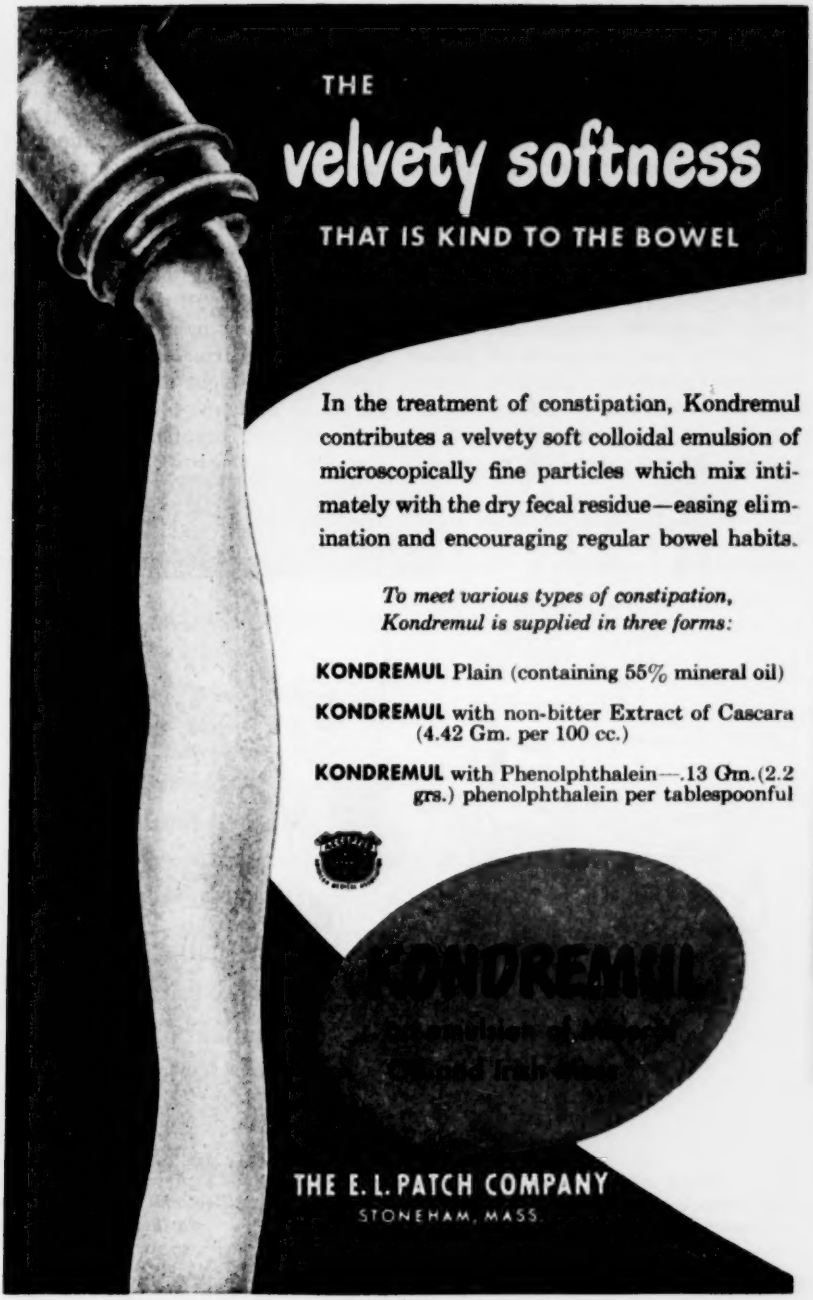
SUPPLIED: Bottles of 100, 500, and 1,000 tablets.

*Trademark of The Vale Chemical Co., Inc.

THE VALE CHEMICAL CO., INC.

Pharmaceuticals

ALLENTOWN • PENNSYLVANIA


THE
velvety softness
THAT IS KIND TO THE BOWEL
In the treatment of constipation, Kondremul contributes a velvety soft colloidal emulsion of microscopically fine particles which mix intimately with the dry fecal residue—easing elimination and encouraging regular bowel habits.
To meet various types of constipation, Kondremul is supplied in three forms:
KONDREMUL Plain (containing 55% mineral oil)
KONDREMUL with non-bitter Extract of Cascara (4.42 Gm. per 100 cc.)
KONDREMUL with Phenolphthalein—.13 Gm. (2.2 grs.) phenolphthalein per tablespoonful
THE E. L. PATCH COMPANY
STONEHAM, MASS.

TREATMENT

ACTH for Allergic Diseases

Hypersensitivity reactions may be blocked by the action of adrenocorticotropic hormone. Striking relief was attained within two days by all of 5 asthmatic patients given total daily dosages of from 30 to 100 mg. of ACTH in six-hour divided doses. In one to eight days all asthmatic symptoms disappeared, report Dr. John E. Bordley and associates of Johns Hopkins University, Baltimore. Therapy was continued for about two to three weeks. Symptoms reappeared in varying degrees about three weeks after cessation.

Bull. Johns Hopkins Hosp. 83:396-398, 1949.

EXPERIMENTAL MEDICINE

Toxicity of Folic Acid

Tolerance of folic acid differs according to sex. No other compound has been reported with such sex variance in pharmacology, state Drs. Alfred Taylor and Nell Carmichael of the University of Texas, Austin. When 15 to 40 mg. of folic acid was injected in mice, all the females died but none of the males. Sublethal dosages given to female mice caused a 10% loss of weight that was recovered slowly. Male mice lost little weight and regained rapidly. Results were the same with mature and immature animals.

Proc. Soc. Exper. Biol. & Med. 71:544-545, 1949.

" . . . Check on Mrs. Hindriff's pneumonia; Mr. Harwood's rheumatism is worse; the Sinson's suspect chickenpox; call on Mrs. Wibble; tonsillectomy at 3:30; typhoid inoculations at 5. Stop me when I've covered 24 hours . . . Hartley's baby has the croup . . . "

In all cases of functional constipation, prompt and adequate bowel function followed by resumption of normal physiological bowel activity can be achieved with gentle-acting AGORAL* 'WARNER'.

Agoral* 'WARNER'

for constipation

effective
gentle
corrective

AGORAL* provides three essentials for correction of acute or chronic constipation—*lubrication, gentle peristaltic stimulation,* and *unabsorbable bulk.*

With AGORAL*, there is no forcing, griping pains or anal seepage.

Effective, pleasant in taste, and readily miscible with foods and beverages, AGORAL* is the ideal laxative for young and old alike.

AGORAL* 'WARNER' is available in bottles of 6, 10, and 16 fluidounces.

William R. Warner & Co., Inc.
New York St. Louis

*T. M. Reg. U. S. Pat. Off.

in rheumatic affections...

how can Pabalate provide better salicylate therapy than pure salicylate itself?

THE SUCCESS of salicylate therapy in rheumatic affections has been shown by authoritative reports[3,6] to depend largely on the maintenance of really adequate blood levels . . . frequently a difficult achievement under usual salicylate administration. Pabalate supplies not only salicylate, but also a "booster" in the form of the antirheumatic para-aminobenzoic acid,[7] which acts to *increase* blood levels of salicylate.[1,2,4,5] In turn, the salicylate increases the blood concentration of the para-aminobenzoic acid.[2] Enteric coating helps Pabalate prevent gastric irritation, insures optimal toleration.

Successful clinical results, contingent on adequate blood levels, can thus be achieved better, more dependably, with Pabalate . . . the "new word for salicylate" in therapy of rheumatic affections.

A. H. ROBINS COMPANY, INC. · RICHMOND 20, VA.
Ethical Pharmaceuticals of Merit since 1878

higher **salicylate blood levels for** better **antirheumatic therapy**

INDICATIONS: *Pabalate Tablets*—for adult patients with rheumatoid arthritis, acute rheumatic fever, fibrositis, gout and osteo-arthritis. *Liquid Pabalate*—for treatment of acute rheumatic fever or other rheumatic diseases in children and as a replacement for tablet salicylate medication; or for adults who prefer a liquid dosage form.

DOSAGE: Average adult dose: two tablets or teaspoonfuls, three or four times daily. Dosage should be adjusted upward if necessary. For children, dosage is proportional to age and severity of condition.

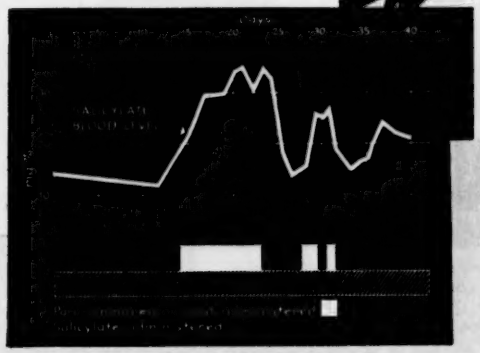
FORMULA: Each enteric-coated tablet or each teaspoonful contains Sodium Salicylate, U.S.P. (5 grs.) 0.3 Gm.; Para-aminobenzoic Acid (as the sodium salt) (5 grs.) 0.3 Gm.

SUPPLIED: Pabalate Tablets in bottles of 100 and 500. Liquid Pabalate in bottles of 1 pint.

REFERENCES:

1. Belisle, M.: Union Med. Canada, 77:392, 1948
2. Dry, T. J. et al.: Proc. Staff Meetings Mayo Clinic, 21:497, 1946
3. Editorial: J.A.M.A., 138:367, 1948
4. Muratore, F. and Pugignano, T.: Bull. Soc. Ital. Biol. Sper., 24:269, 1948
5. Parker, W. A.: Quart. J. Med., 17:229, 1948
6. Reid, J.: Quart. J. Med., 17:139, 1948
7. Rosenblum, H. and Fraser, L. E.: Proc. Soc. Exper. Biol. and Med., 65:178, 1947

Para-aminobenzoic acid increases blood levels of concurrently administered salicylate.[7]



For treatment of rheumatic affections

Rx *Pabalate*®

Robins

VENEREOLOGY

Aureomycin for Syphilis

Tentative results with subcurative doses indicate that aureomycin may be effective in treatment of syphilis in human beings. Dr. R. R. Willcox of King Edward VII Hospital, Windsor, England, in the course of a venereal disease investigation for the government of South Rhodesia, gave aureomycin orally to 9 Bantu Negroes with early syphilis. Doses ranged from 750 to 1,500 mg. and were given over twenty-four to forty-eight hours. At forty-eight hours darkfields were negative in each instance and remained so as long as observation was possible, three to seventeen days. In 6 cases *Treponema pallidum* had disappeared at twenty-four hours, but in 3 cases, darkfields were positive at that time. Healing was most pronounced with lesions of secondary syphilis and, in such cases, at least equalled results obtained with penicillin.

Brit. M. J. 4616:1076-1077, 1949.

ANTISEPTICS

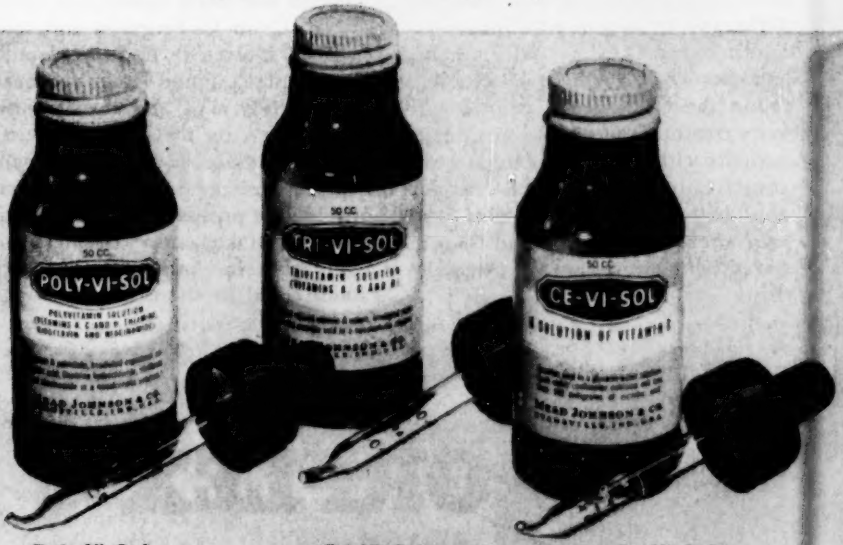
Wound Disinfectant

Dibromsalicil, a topical bacteriostatic agent, may be useful for disinfection of chronic wounds in patients hypersensitive or resistant to penicillin and the sulfonamides. The antiseptic, developed in 1943 in Heidelberg, Germany, has been successfully used by Dr. R. Frey on 100 surgical patients.

Klin. Wchnschr. 27:452-455, 1949.

new convenience • new flexibility in dosage
new all-around usefulness

3 new water-soluble liquid vitamin preparations



Poly-Vi-Sol

Each 0.6 cc. supplies:

Vitamin A	5000 USP units
Vitamin D	1000 USP units
Ascorbic Acid	50.0 mg.
Thiamine	1.0 mg.
Riboflavin	0.8 mg.
Niacinamide	5.0 mg.

Tri-Vi-Sol

Each 0.6 cc. supplies:

Vitamin A	5000 USP units
Vitamin D	1000 USP units
Ascorbic Acid	50 mg.

Ce-Vi-Sol

Each 0.5 cc. supplies:

Ascorbic Acid	50 mg.

Each of these preparations is ideally suited for routine prophylactic or therapeutic vitamin supplementation for infants and children as well as adults.

Water-soluble, pleasant tasting, they can be stirred into the infant's formula, or into fruit juice, milk, cereals, puddings, etc.; or incorporated in mixtures for tube feeding.

Each is scientifically formulated and ethically marketed. They are supplied in 15 and 50 cc. bottles, with an appropriately calibrated dropper.

MEAD'S

MEAD JOHNSON & CO. EVANSVILLE 21, IND., U.S.A.

HEART DISEASE

Oral Mercuhydrin and Ascorbic Acid

In controlling congestive heart failure, tablets containing 60 mg. of Mercuhydrin combined with 100 mg. of ascorbic acid seem to be effective, alone or as a supplement to parenteral therapy. From 1 to 3 tablets are administered daily. Drs. Carl F. Shaffer and Don W. Chapman of Houston found the tablets satisfactory as primary treatment of about one-third of patients with slight to moderate congestive failure. Control was considerably better when the tablets were used after compensation had been restored with injections of Mercuhydrin.

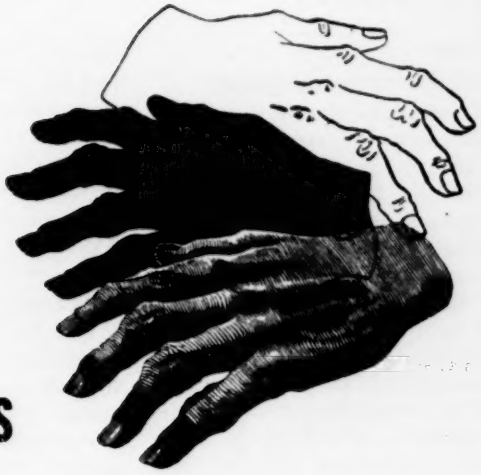
Proc. Central Soc. Clin. Research 22:77, 1949.

EXPERIMENTAL SURGERY

Liver Regeneration

Obstruction of biliary flow does not appear to interfere with parenchymal liver regeneration. Two weeks after livers of protein-depleted rats had been partially removed and the common bile ducts ligated and divided, Dr. Colin C. Ferguson and associates of University of Pennsylvania, Philadelphia, found that regeneration of liver mass and liver protein was greater in these animals than in ad-libitum-fed or pair-fed, partially hepatectomized rats. When the effect of bile duct proliferation and hepatic fibrosis is taken into consideration, liver protein production seemed about equal in the two groups.

Am. J. Physiol. 159:343-350, 1949.



in arthritis

- *unlike gold and other drugs*

safe detoxifying colloidal sulfur

- *relieves pain*
- *reduces joint swelling*
- *produces clinical remission even in the most severe cases*

Sulphocol® *colloidal sulfur compound*

ORAL AND PARENTERAL

Sulphocol Capsules (5 gr.) 1 or 2 after meals. Bottles of 100. Sulphocol Sol (parenteral), 25 cc. vials; 12 and 100-2 cc. vials. 1/4 to 1/2 cc. intramuscularly at 3 to 7 day intervals, gradually increased to 3 cc. Write for literature and samples of Sulphocol Capsules.

MULFORD COLLOID LABORATORIES PHILADELPHIA, U.S.A.

A Product of the Mulford Colloid Laboratories
THE NATIONAL DRUG COMPANY, PHILADELPHIA 44, PA.
Manufacturers of Pharmaceutical, Biological and Biochemical Products for the Medical Profession

NEUROSURGERY

Uses of Electrocorticography

Electrodes placed directly on the cerebral cortex to record electrical changes in the brain are particularly valuable in localizing subcortical brain tumors and epileptic foci during neurosurgery. Drs. Curtis Marshall and A. Earl Walker of Johns Hopkins University, Baltimore, find that a tumor is usually indicated by slow wave activity over the site. The epileptogenic focus may be determined by several manifestations: [1] focal spontaneous spiking, [2] induction of a convulsive aura, [3] long-lasting after-discharge, and [4] initiation of spiking by administration of Metrazol. Electrocorticography may be performed in the ordinary operating room and a good record obtained without artifact if precautions are taken to ground the patient and the operating table to the electroencephalograph and to disconnect the electrosurgical units, electric motors, and sometimes the electric light of the room at the wall plug.

Bull. Johns Hopkins Hosp. 85:344-359, 1949.

EXPERIMENTAL MEDICINE

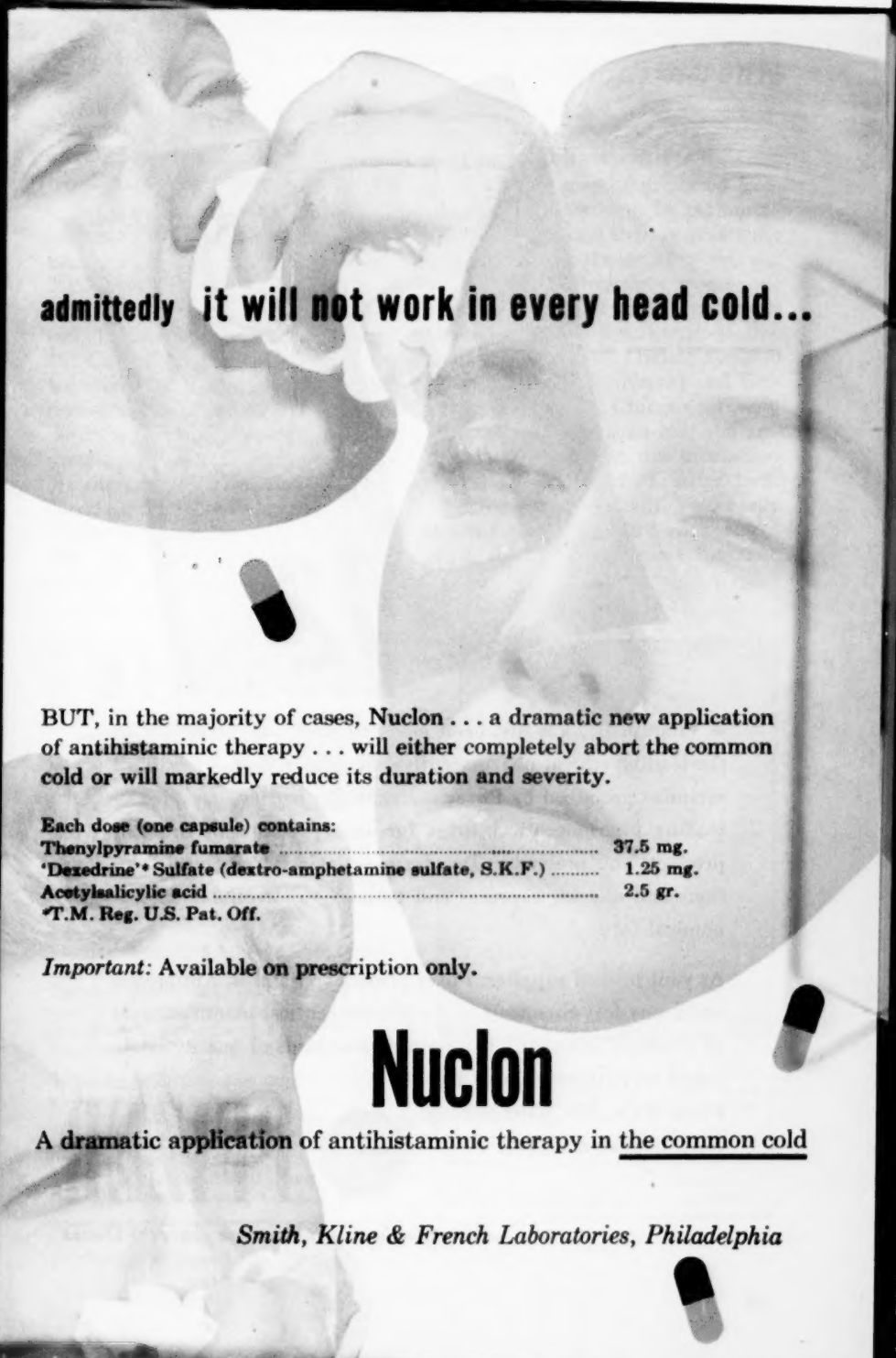
Atherosclerosis Regression

Vascular lesions produced in chicks by prolonged feeding of food with high cholesterol content gradually decrease in severity when normal diet is resumed. Early lesions may be completely resorbed, find Drs. Louis Horlick and Louis N. Katz of Michael Reese Hospital, Chicago. Within fourteen weeks after cessation of test diet, fibrosis and calcification replace active atheromatous changes.

J. Lab. & Clin. Med. 34:1427-1442, 1949.

BACKWARD, TURN BACKWARD O TIME IN THY FLIGHT

"Well just suppose, Mr. Achilles, that one day something DID happen to your heel. Under this scheme you could have it treated absolutely free."—Punch



admittedly it will not work in every head cold...

BUT, in the majority of cases, **Nuclon** . . . a dramatic new application of antihistaminic therapy . . . will either completely abort the common cold or will markedly reduce its duration and severity.

Each dose (one capsule) contains:	
Thenylpyramine fumarate	37.5 mg.
'Dexedrine'* Sulfate (dextro-amphetamine sulfate, S.K.F.)	1.25 mg.
Acetylsalicylic acid	2.5 gr.

*T.M. Reg. U.S. Pat. Off.

Important: Available on prescription only.

Nuclon

A dramatic application of antihistaminic therapy in the common cold

Smith, Kline & French Laboratories, Philadelphia

• Vitamin B_{12} has just been made commercially available to the leading ethical pharmaceutical firms by Pfizer. As with all vitamins produced by Pfizer, Vitamin B_{12} will be marketed to leading pharmaceutical firms for incorporation in the end products you prescribe. Two forms—one for parenteral solutions and one for capsules and tablets—are available in economical forms.

As your unseen supplier, Pfizer provides Vitamins, Antibiotics and many fine chemicals to the pharmaceutical manufacturers of America, constantly maintaining standards of quality established over 100 years ago. Chas. Pfizer & Co., Inc., 630 Flushing Ave., Brooklyn 6, N. Y.

PFIZER QUALITY

PFIZER

Manufacturing Chemists for 100 Years

NUTRITION

Liver Damage Produced by Alcohol and Sugar

Hepatic lesions which are usually associated with alcoholism may be caused by a lack of lipotropic agents. Pure ethyl alcohol does not appear to have a more specific toxic effect on rats' livers than does sugar, observe Dr. C. H. Best and associates of the University of Toronto, Canada. Excessive consumption of alcohol or sugar apparently supplants choline-containing foodstuffs and, by increasing the caloric intake, augments the need for lipotropic agents. When choline or methionine is added to diet, liver damage does not occur.

Brit. M. J. 4635:1001-1006, 1949.

EXPERIMENTAL MEDICINE

Drug for Poliomyelitis

Nerve cells may be protected from the poliomyelitis virus by malononitrile, a compound that increases the Nissl substance. Doses of 3 mg. per kilogram of body weight modify the disease in mice. By starting treatment the day after slight infection, Drs. Paul B. Szanto and Oscar Felsenfeld of Northwestern University and University of Illinois, Chicago, prevented death of more than half the animals and prolonged the incubation period nearly threefold. After large injections of virus, fatalities were only delayed. Of mice treated after paralysis, a third regained some function.

Proc. Soc. Exper. Biol. & Med. 72:15-17, 1949.

INSTRUMENTS

Electrosurgical Snare

Tissue is easily removed from the sigmoid or rectum by an electrically charged snare. A wire loop is carried into the bowel through a long, insulated tube, fitted with a pistol grip. This tube is inserted through an ordinary sigmoidoscope. The size of the snare is determined by perforations in the distal end of the tube, through which the doubled wire may be threaded. Insulated tubes of desired length, 6, 10, or 14 in., are screwed into the pistol grip handle. The wire snare is moved in and out of the perforated end of the tube by a trigger ring attachment. The wire is connected with an electrosurgical unit generating cutting and coagulating currents, explains Dr. Robert Turell of Beth Israel and Montefiore hospitals, New York City. Special electrodes have been designed for desiccation of the bed of mucosa from which a growth or section of tissue has been removed.

New York State J. Med. 49:2311-2312, 1949.

"Howdy, Doc." "Hello, Carp!"

For prompt relief and healing of burns – *Chloresium Therapy*

Clinical experience proves value of Chloresium chlorophyll preparations in the treatment of burns.

From American Journal of Surgery, Jan., 1947

"Two patients were admitted with extensive and severely infected second and third degree burns of the head and both hands. The most severely burned hand in one case and the better hand in the other case were treated with continuous wet dressings of chlorophyll, Chloresium Solution (Plain), while the other hands were treated with boric solution . . .

"In both cases . . . the chlorophyll-treated hand was more comfortable. The chlorophyll hands produced granulations of better quality and more rapidly . . . final result after grafting has been better in the chlorophyll-treated hands."

From the Guthrie Clinic Bulletin, Jan., 1947

"Those (burn) patients who received Chloresium in the initial treatment showed the greatest beneficial effects. It was noticed that healing seemed to occur faster under chlorophyll therapy (*Chloresium*) than when other substances such as petrolatum were used. In addition, secondary infection was kept at a minimum. In several cases having bilateral involvement of extremities, one extremity was used as a control and treated with petrolatum while the other extremity was dressed with Chloresium Ointment. In each, the part treated with the water-soluble chlorophyll (*Chloresium*) healed more rapidly and with less infection than the control."

From Archives of Dermatology and Syphilology, March, 1948

"In 5 patients with chemical burns and sunburn, the water-soluble chlorophyll cream (Chloresium Ointment) was amazingly healing and soothing to the injured epithelium."

WHENEVER TISSUE HEALING IS A PROBLEM

Not only in burns, but also in wounds, ulcers and dermatoses—reports in more than 1150 published clinical cases show the majority of cases respond rapidly to treatment with Chloresium Solution (Plain) or Ointment.

These results are due to the therapeutic action of the *water-soluble derivatives of chlorophyll.* They are natural nontoxic biogenic agents which accelerate normal cell regeneration, thus measurably hastening the healing process. At the same time, they help control superficial infection, provide symptomatic relief and deodorize foul-smelling conditions.

Try Chloresium on your next burn case—or any other case where fcster healing or deodorization is desired. It is completely nontoxic, bland, soothing.

Chloresium

SOLUTION (PLAIN); OINTMENT; NASAL AND AEROSOL SOLUTIONS

Ethically promoted—at leading drugstores

U. S. Pat. 2,120,667—Other Pats. Pend.

FREE—CLINICAL SAMPLES

RYSTAN CO., Dept. **MM-1**
7 N. MacQuesten Pkwy., Mt. Vernon, N. Y.

Please send clinical samples of Chloresium Ointment and Solution (Plain). I also want literature ☐ samples of Nasal and Aerosol Solutions ☐ (check if desired).

*Dr.*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

ANTIBIOTICS

Tularemia and Aureomycin

Patients with tularemia may be benefited by aureomycin therapy. *Bacillus tularensis* is susceptible to the antibiotic both in vitro and in mice infected intraperitoneally. Administration of aureomycin may be oral or subcutaneous. Good results in treatment of 3 human beings with the disease were obtained by Dr. John C. Ransmeier of Emory University, Atlanta. The drug's low toxicity and oral effectiveness are particularly advantageous.

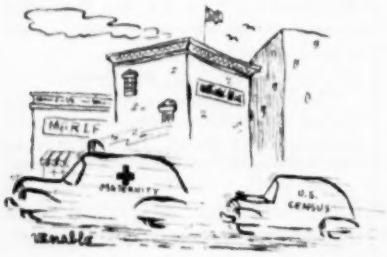
J. Clin. Investigation 28:977-982, 1949.

SURGERY

Disinfection of Skin

Preparatory sterilization of the hands of the surgical team and of the patient's skin with 3% Hexachlorophene in pHisoderm reduces the incidence of postoperative infections. A two-minute scrub with this combination of detergent and antiseptic is equivlaent to at least a routine ten-minute scrub, find Drs. Bromley S. Freeman and Thomas K. Young, Jr., of McCloskey Veterans Administration Hospital, Temple, Tex. Effects are rapid, atraumatic, and nonsensitizing.

Hosp. Conf. Clin. Cong. A.C.S., 1949.



ENZYMES

Hyaluronidase in Pediatric Dehydration Therapy

Subcutaneous absorption of plasma and glucose or saline and glucose by dehydrated infants is greatly facilitated if hyaluronidase is infused with the mixture. Injection and absorption are also relatively painless. Best results were achieved by administering the enzyme through the rubber tubing about an inch from the needle as soon as the fluid began to flow, found Drs. Wilfrid Gaisford and D. G. Evans of the University of Manchester, England. The method is particularly useful for children with gastroenteritis and pyloric stenosis and may obviate the need for preoperative intravenous infusions in the latter disease.

Lancet 257:505-507, 1949.

TREATMENT

Intravenous Nutritive

An emulsion that combines the primary foodstuffs—carbohydrate, protein, and fat—is a valuable solution for intravenous feeding. An infusion material prepared by Dr. B. G. P. Shafiroff and associates of New York University, New York City, supplies 5% glucose, 5% protein hydrolysate, and 10% fat. Up to 15 to 20% fat may be used. The stabilizing agent, Knox P-20 gelatin, is mixed with glucose, amigen, and refined coconut oil in a Logeman homogenizer. The emulsion was used alone or as a supplement in 100 cases before or after major or minor surgery. Alertness and activity of lethargic, malnourished individuals are increased by the diet, and wound healing is promoted.

Surg., Gynec. & Obst. 89:398-404, 1949.

For Reduction in the Frequency of Cough

PER-SED

Features

DIHYDROCODEINONE BITARTRATE which is approximately SIX TIMES MORE POTENT THAN CODEINE SALTS

EACH FLUID OUNCE CONTAINS:

Dihydrocodeinone Bitartrate	1/6 gr.
Ammonium Chloride	16 grs.
Citric Acid	12 grs.
Chloroform	2 min.
Syrup and Aromatics	q. s.

Additional Advantages

RELIEF from COUGHS is PROMPT and PROLONGED

LESS INHIBITION on EXPECTORATION

Is NOT CONSTIPATING and when used in Chronic Coughs does not necessitate the use of Mineral Oils or Laxatives

DOES NOT CAUSE NARCOSIS. Low toxicity when used in therapeutic doses.

The **Columbus Pharmacal** Co. COLUMBUS 15, OHIO.

Arthotabs

FOR THE CONTROL OF SYSTEMIC METABOLIC DISTURBANCES IN ARTHRITIS

Increase Cellular Respiration

Stimulate Oxygen Utilization by Tissues

Permit Prolonged Salicylate Administration Without Liver Damage

Maintain Ascorbic Acid Levels

The following case reports are typical of results obtainable with Succinate-Salicylate Therapy in Arthritis (Szucs, M. M.: Ohio State Med. Jour. 43:10, 1947)

CASE REPORTS

OSTEO ARTHRITIS—(208 Cases)—95% improvement within 8 days.

INFECTIOUS ARTHRITIS — (17 Cases)—No evidence of arthritic activity after 10 days. Treatment discontinued in 2 weeks.

RHEUMATOID ARTHRITIS — (27 Cases)—81% showed evidence of definite improvement and apparent control of arthritic activity within 3 months.

SPONDYLITIS—(95 Cases)—Ample evidence of decreased pain, increased motion and improved functional capacity.

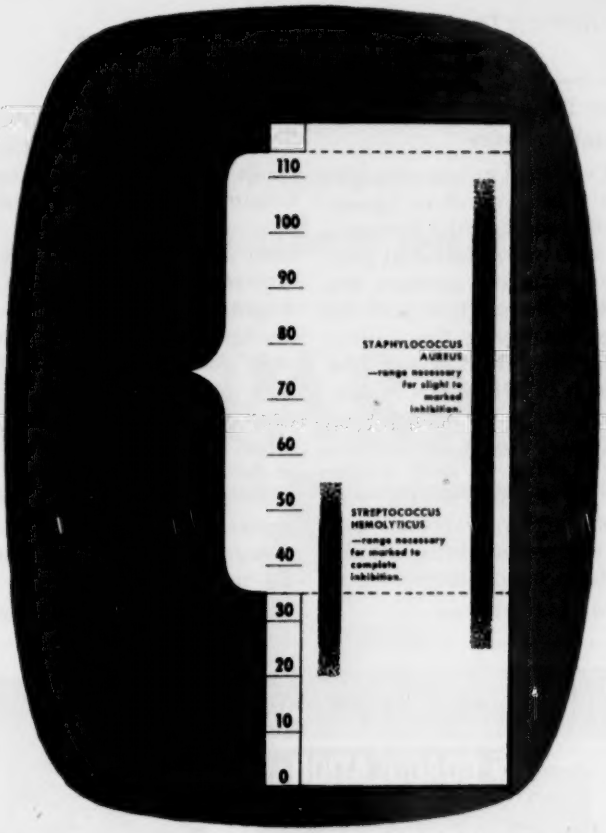
ACUTE RHEUMATIC POLYARTHRITIS — (34 Cases) — In every case evidence of joint symptoms, fever and accelerated sedimentation rate disappeared within 14 days.

ARTHOTABS
(PLAIN)
Each Tablet Contains:
Acetylsalicylic Acid . . 0.325 Gm.
Succinic Acid . . . . . 0.195 Gm.
Calcium Succinate . . . 0.130 Gm.
Ascorbic Acid . . . . . 30.000 mg.

ARTHOTABS No. 2
(ENTERIC COATED)
Each Tablet Contains:
Sodium Salicylate . . . 0.215 Gm.
Succinic Acid . . . . . 0.108 Gm.
Calcium Succinate . . . 0.108 Gm.
Ascorbic Acid . . . . . 20.000 mg.

Samples and Literature on Request

The **Columbus Pharmacal** Co. COLUMBUS 15, OHIO.



Effective Salivary Levels of Tyrothricin

Used as recommended, one Lozille maintains for approximately *one-half hour* salivary tyrothricin levels as shown in chart.

The sustained salivary concentrations insure broad antibacterial action against gram-positive organisms responsible for acute oropharyngeal infections.

Tyrothricin, unlike topical penicillin, is remarkable for its *lack of local toxicity*. Pleasant-tasting, Lozilles also provide propesin, for non-toxic, long-lasting analgesia.

Each Lozille contains *2 mg.* of tyrothricin and 2 mg. of propesin.

Supplied in vials of 15 Lozilles.

LOZILLES

(Loh-Zeels) TYROTHRICIN-PROPESIN LOZENGES

WHITE LABORATORIES, INC., Pharmaceutical Manufacturers, Newark 7, N. J.

SHORT REPORTS

EXPERIMENTAL SURGERY

Pulmonary Edema from Intracranial Pressure

Bilateral cervical vagotomy appears to exert a protective effect against the pulmonary edema which frequently follows increased intracranial pressure. After intracranial pressure was augmented by air injection, half the guinea pigs observed by Drs. Gilbert S. Campbell and M. B. Visscher of the University of Minnesota, Minneapolis, had edema, congestion, and hemorrhage in the lungs. In addition, the ratios of lung to body weight and lung to ventricle weight were considerably higher. Vagotomy performed a few seconds before air injection reduces lung damage.

Am. J. Physiol. 157:130-134, 1949.

NEUROPSYCHIATRY

Potassium for Insulin Coma

When insulin shock therapy of psychosis results in deep prolonged coma despite intravenous dextrose, potassium may be restorative. Drs. William Stark, of George Washington University, Washington, D. C., and S. Eugene Barrera, of Albany Medical College, Albany, N. Y., administer a 10% solution of potassium chloride with great caution. Doses of 0.02 to 0.04 gm. are given very slowly from a 1-cc. tuberculin syringe, for instance, at the rate of 1 gm. in twenty minutes, with constant auscultation of the heart. Rhythm alters after each injection and must be reestablished before the next dose.

Arch. Neurol. & Psychiat. 62:280-286, 1949.

a major step
in rehabilitation of the parkinsonian patient

PANPARNIT T.M.

Known previously to investigators as PARPANIT.

Treatment of the Parkinsonian syndrome with PANPARNIT was observed by Schwab and Leigh[1] "to be superior to the previous medication" in 65% of cases. With a careful regimen of gradually increasing dosage, "very satisfactory results with this new compound will follow."

By reducing rigidity and tremor PANPARNIT frequently enables the Parkinsonian patient to resume a more nearly normal life . . . to perform simple daily tasks, to feed, to shave, and to dress himself. Improvement of physical status leads to increasing self-reliance and a happier frame of mind—a major step toward mental as well as physical rehabilitation.

A totally new synthetic drug, PANPARNIT offers the advantages over the belladonna alkaloids of frequently affording more satisfactory relief and rarely causing disturbances of vision or dryness of the mouth.

1. Schwab, R. S. and Leigh, D.: J.A.M.A. *139*:629, 1949.

Geigy

Fuller information regarding clinical studies and suggested dose schedules will be furnished gladly.

PANPARNIT (caramiphen hydrochloride): Available as sugar-coated tablets 12.5 mg. (bottles of 100) and 50 mg. (bottles of 50, 250 and 1000).

GEIGY COMPANY, INC., 89-91 Barclay St., New York, N. Y.

ANALGESIA

Relief of Intractable Pain

An analgesic agent four times as potent as morphine on a per milligram basis affords relief from intractable pain due to cancer and has been used successfully for postoperative analgesia. Dr. L. L. Zager and associates of the State University of Iowa, Iowa City, gave the drug, NU-2206, to 63 patients. The most effective dosage for adults was 3 to 6 mg., subcutaneously. The duration of analgesia is greater than that obtained with 10 to 15 mg. of morphine sulfate. The prolonged effect of NU-2206 is beneficial to patients who require protracted relief and in whom frequent injections are undesirable.

J. Lab. & Clin. Med. 34:1530-1537, 1949.

ENDOCRINOLOGY

Iodinated Thiouracil

Iodothiouracil and other iodinated compounds may be used in the preparation of thyrotoxic patients for thyroidectomy. The effects of 5-iodo-2-thiouracil resemble those of iodide therapy more closely than of thiouracil. Operative and postoperative course is smooth. Iodination seems to increase concentration of thiouracil in the thyroid and spares other tissues from unnecessary exposure. Maximum results were usually obtained within fifteen days by Dr. Robert H. Williams of the University of Washington, Seattle, and associates of Harvard University, Boston. Further therapy with iodothiouracil is useless.

J. Clin. Endocrinol. 9:801-817, 1949.

When your patient must smoke less!

EXPERIENCED observers say that there is no "tapering off" from smoking. Smokers are not given to counting their cigarettes. Lighting a cigarette becomes a subconscious habit with them.

When your patient must moderate his smoking for any reason, SANO Cigarettes are the answer to the problem. By smoking as many SANO Cigarettes as he usually smokes of untreated brands, he is exposed to less than one-half of the nicotine.

SANO Cigarettes are not medicated. They are not a substitute. The tobacco used in these cigarettes is treated by a special process that removes an average of 51.6 per cent of the nicotine present. This leaves a residue of less than one per cent in the tobacco.

Yet, the flavor and aroma of the tobacco are in no way affected, because the essential oils in the tobacco are not removed. The tobacco is thoroughly aged by maintaining abundant stocks; curing is done slowly and with exceptional care. Skillful blending does the rest.

Pipe tobacco, similarly processed, is also available.

For a free professional trial supply, please return the coupon or write on your letterhead

Fleming-Hall Tobacco Co., Inc.
Dept. A, 595 Fifth Avenue
New York 17, N. Y.

Please send a trial supply of Sano Cigarettes.
☐ Check here if you also wish Sano Pipe Tobacco.

Name.....M. D.

Street.....Zone.....

City and State.....

VENEREOLOGY

Antitreponemal Effect of Oral Chloromycetin

Early syphilis may be effectively treated with chloromycetin given by mouth. Dr. Monroe J. Romansky and associates of George Washington University, Washington, D.C., suggest a dosage of 30 mg. per kilogram of body weight per day divided into 6 doses given at four-hour intervals. This regimen was followed four to eight days for each of 24 patients. In every case lesions began to heal within twenty-four hours, and in most cases healing was complete by the end of therapy. In a few instances resolution was delayed because the location of the lesions predisposed to slow healing. Healing seems to be initiated from the base of the ulcer rather than from the periphery as with penicillin. Treponemas disappear and darkfields are usually negative within a day or two. The only untoward reactions were occasional mild diarrhea and dryness of the mouth. The Jarisch-Herxheimer reaction occurs less frequently than with penicillin therapy or is so slight as to escape observation. Several patients experienced a transient generalized aching sensation forty-eight hours after treatment began, but none had fever or eruptions.

Science 110:639-640, 1949.

YOUR FAVORITE STORY

May bring you $1. Send it to the Humor Editor, MODERN MEDICINE, *84 So. Tenth St., Minneapolis, Minn.*

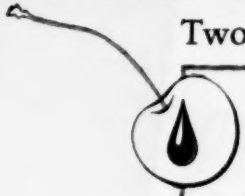
For a better prognosis in Chronic Hepatitis

Palatability remains a factor of major importance in the administration of choline products.

In Syrup Choline Dihydrogen Citrate (Flint) the pleasant citrate taste is skillfully blended into a cherry flavored syrup to produce a product of outstanding palatability and stability.

The continued acceptance of choline by the patient during extended periods of therapy can be assured by the specification—"Choline (Flint)."

CHOLINE (FLINT)



Two convenient dosage forms:

"Syrup Choline (FLINT)"

—25 per cent W/V—containing one gram of choline dihydrogen citrate in each 4 cc., is supplied in pint and gallon bottles.

"Capsules Choline (FLINT)"

—containing 0.5 gram of choline dihydrogen citrate, are supplied in bottles of 100, 500 and 1000.

For your copy of "The Present Status of Choline Therapy in Liver Dysfunction," write—

FLINT, EATON & COMPANY
Decatur, Illinois

DIAGNOSIS

Thiamin Deficiency Test

Prolonged elevation of the blood pyruvic acid after ingestion or intravenous administration of glucose is indicative of acute thiamin deficiency. In the diagnostic test described by Drs. R. M. Taylor and E. W. McHenry of Toronto General Hospital, Toronto, 100 gm. of glucose in 400 cc. of water flavored with lemon juice is swallowed in no more than a half-hour period, or 50 cc. of 50% glucose is injected intravenously. A 10-cc. blood sample is taken immediately, again after ½ hour, and after 1, 2, and 3 hours. When blood is being withdrawn, the tourniquet is applied for as short a time as possible and patients are told not to clench fists, since either maneuver tends to increase local pyruvic acid concentration. The test should be performed when the patient enters the hospital, before any food containing thiamin has been consumed. In health, blood pyruvate in the basal state is approximately 1 mg. per cent, rises slightly for the first hour after the glucose meal and returns to the fasting level in three hours. With thiamin deficiency the level of pyruvate is slightly increased in the fasting state, rises sharply during the test period, and remains high. Addition of thiamin to the diet rapidly lowers the blood pyruvic acid curve. Therefore, comparison of levels before and after a diet with thiamin supplements aids the diagnosis. However, since a high pyruvic acid curve may also reflect increased carbohydrate metabolism, glucose tolerance curves should be determined simultaneously.

Canad. M.A.J. 61:513-519, 1949.

ISOTOPES

Abscess Detector

Radioactive silver may become a valuable aid in finding obscure foci of infection, report Dr. Harold D. West and associates of Meharry Medical College, Nashville, Tenn. Ag^{111} and $Ag^{108, 110}$ were injected into rats infected with *Streptococcus hemolyticus* from the throat of a patient. Tissues were then assayed with a Geiger-Müller counter. The isotopes were found to have concentrated in the induced abscesses. The isotopes are excreted by the liver into the intestine, presumably by way of the bile.

J. Lab. & Clin. Med. 34:1376-1379, 1949.

EVENTS

Conference on Palsy

The annual meeting of the American Academy for Cerebral Palsy will be held at the Waldorf-Astoria Hotel, New York City, Feb. 17 and 18. Scientific sessions will be open to all physicians. Every phase of cerebral palsy will be discussed.

"Kindly stop mumbling and tell me your trouble."

Check Enclosed..... Please Bill Me.....

The Armour Laboratories, now in its 63rd year in the processing of endocrine products for the medical profession, is cognizant of the invaluable contributions of the eminent Dr. George R. Minot in his study of blood and of his research, which assisted immeasurably in the development of potent liver preparations for the treatment of anemias.

Thirteenth in the series, PORTRAITS OF PIONEERS in Endocrinology. A full-color reproduction of this painting, suitable for framing, is available upon request. On your professional letterhead, please address:

ARMOUR *Laboratories*
CHICAGO 9, ILLINOIS

Dr. George R. Minot 1885-

Dr. Minot, Professor of Medicine, Emeritus, at Harvard University, received his medical degree from Harvard in 1912. He then became Medical House Pupil at the Massachusetts General Hospital and thereafter was Assistant Resident at the Johns Hopkins Hospital and later Research Fellow in the Physiology Laboratory of the Johns Hopkins Medical School. There under the guidance of Dr. William H. Howell he worked on blood coagulation.

In 1912 Dr. Minot joined the faculty of the Harvard Medical School, continued his investigations in the field of blood diseases: transfusion problems, hemorrhagic disorders, polycythemia, and the treatment of leukemia. He was persistently curious about the possibility that dietary deficiency might be related to the cause of pernicious and other anemias. In 1926, the entire medical world was electrified by his discovery, together with Dr. William P. Murphy, of the effectiveness of a diet containing liver in the treatment of pernicious anemia. In association with Professor Edwin J. Cohn, the pioneer steps in the chemical fractionation of liver were taken and soon led to the preparation of clinically active liver extracts. For this conquest of a hitherto fatal malady, Dr. Minot and Dr. Murphy, jointly with Dr. George H. Whipple, received the Nobel Prize in Physiology and Medicine for 1934.

In 1928, Dr. Minot became Director of the Thorndike Memorial Laboratory of the Boston City Hospital and there for twenty years continued his investigations of anemias and nutritional deficiencies.

PHARMACOLOGY

Extract to Reduce High Blood Pressure

Hypotensive effects of Veriloid, an extract of *Veratrum viride*, indicate that the drug may be valuable in treatment of patients with hypertension. Intravenous administration was used by Dr. J. W. Stutzman and associates of Boston University to reduce blood pressure in normotensive dogs. The oral route was less effective. Emetic action is diminished when food is in the stomach.

Proc. Soc. Exper. Biol. & Med. 71:725-727, 1949.

GASTROENTEROLOGY

Therapy of Megacolon

A cholinergic drug, Urecholine, greatly improves peristalsis of a hypotonic dilated colon. For 6 patients with Hirschsprung's disease, regular daily evacuations were obtained from dosage of 5 to 10 mg. three times daily, with mineral oil and enemas when needed. Doses were gradually increased. Dr. Merl J. Carson of Washington University, St. Louis, reports that in 3 instances spontaneous stools continued after medication ceased.

J. Pediat. 35:570-573, 1949.

EXPERIMENTAL SURGERY

Repair of Common Bile Duct

When an end-to-end anastomosis is not feasible after injury of the common bile duct, a grafted tubular structure with an independent blood supply apparently will carry the bile satisfactorily to the duodenum. Dr. Charles M. O'Leary and associates of the University of Oklahoma, Oklahoma City, used a segment of uterine horn for grafting into the biliary system of dogs. The biliary systems of the dogs that lived longer than four weeks after the operations were apparently functionally normal.

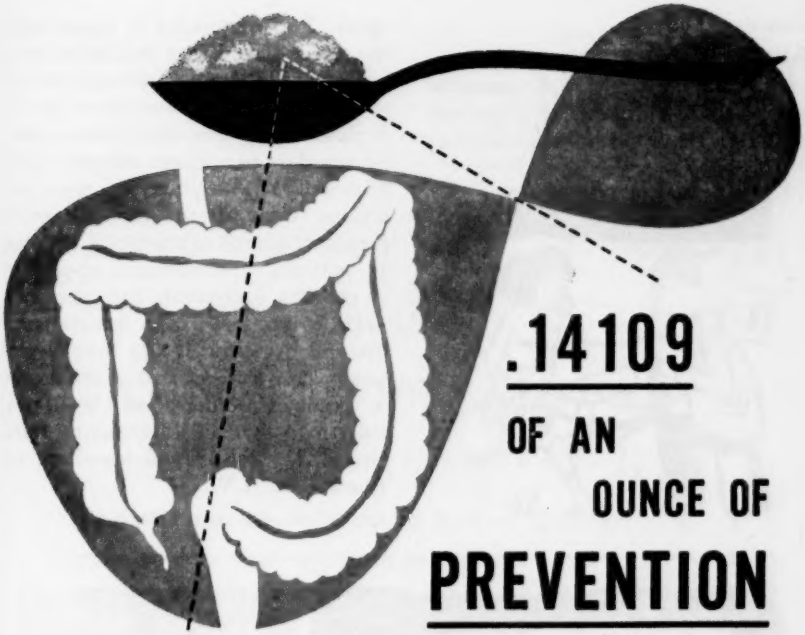
Proc. Soc. Exper. Biol. & Med. 71:616-619, 1949.

NUTRITION

Ulcer from Avitaminosis B

Penetrating duodenal ulcers are produced in rats by a diet deficient in pantothenic acid but adequate in all other respects. Lesions developed in the duodenums of 60% of rats examined by Dr. Benjamin N. Berg and associates of Columbia University, New York City, after periods of about 100 to 125 days. Duodenal mucosa became atrophic in all cases.

Proc. Soc. Exper. Biol. & Med. 71:374-376, 1949.



.14109 OF AN OUNCE OF PREVENTION

Konsyl, the original Plantago Ovata concentrate, is designed for the *safe* and *effective* prevention and treatment of constipation . . . designed for those people who feel that they must "take something" every day. It is not a laxative in the sense that it will move the bowels of one who is constipated but, because it adds water and lubrication to the intestinal contents, Konsyl promotes normal peristalsis. Taken either before or after meals, this ".14109 of an ounce of prevention" (approximately a rounded teaspoonful) produces soft and easily evacuated stools. Try it in the next case where it is applicable. Send for a sample.

Burton, Parsons & Company

1515 U STREET, N. W. • WASHINGTON 9, D. C.

GASTROENTEROLOGY

Amebacidal Agents

For the treatment of intestinal amebiasis, bismuthoxy *p*-N-glycolylarsanilate (Win 1011) is a satisfactory agent. The compound is apparently less toxic than other available arsenic amebacides and approximately as effective. Win 1011 was given orally in doses of 0.5 gm. three times daily for ten days to patients infested with *Endamoeba histolytica*. No toxic reactions were noted and all were promptly cleared of amebiasis. Among 31 patients, 3 recurrences appeared on the fifth, fourteenth, and twentieth week, respectively, after cessation of therapy. Activity of the drug on a weight basis exceeds that of chiniofon or diiodo-oxyquinoline and is slightly less than that of carbarsone, state Dr. E. W. Dennis and associates of Rensselaer, N.Y.

Am. J. Trop. Med. 29:683-689, 1949.

Here's a key to a wealth of medical knowledge

. . . without cost to you!

The index for the 24 issues of Modern Medicine published in 1949 will soon be ready. Every item of clinical interest will be indexed with plenty of cross references. The index, just the right size to keep on your desk or file with your copies of Modern Medicine, will be sent without charge to every physician who requests a copy. Reserve yours now.

Mail the coupon today

MODERN MEDICINE, 84 South 10th St., Minneapolis 3, Minn.

Send to me, without charge, a copy of the 1949 Modern Medicine Index as soon as it is available. (Please print your name and address)

Name.....

Address.....

City..... **Zone**.... **State**.....

What Would You Say?

Twice a month we will select a caption for this cartoon from those sent in by our readers and send the author $5. This caption was written by

George N. Wise, M.D.
New York City

Mail your caption to The Cartoon Editor, MODERN MEDICINE, 84 South 10th St., Minneapolis 3, Minn.

"You are asking me *for* my opinion *of Oscar Ewing?"*

Babies respond to nourishment with good flavor

When baby enjoys his food he'll eat it—eagerly—without coaxing. And when his meal time is a HAPPY TIME that's when food is digested more readily and when a baby derives most benefit from it.

Beech-Nut makes foods of high quality that babies enjoy. The reputation of Beech-Nut goes into every single one of these foods—they have that distinctive Beech-Nut flavor that appeals to the taste.

Babies love them—thrive on them

Beech-Nut

FOODS for BABIES

Beech-Nut high standards of production and ALL ADVERTISING have been accepted by the Council on Foods and Nutrition of the American Medical Association.

A Complete Choice

to meet the normal dietary needs of babies

SOLD IN GLASS EVERYWHERE

AND NOW—The NEW Cereal Food

That you may study the approximate analysis and know the nutritional value of this new Beech-Nut Cereal Food—we will be only too happy to send you this information if you request it. You will then be in a position to recommend this fine food with even greater confidence and enthusiasm. Address Beech-Nut Packing Co., Dept. MM. Canajoharie, N.Y.

Current Books & Pamphlets

This catalogue is compiled from all available sources, American and foreign, to insure a complete listing of the month's releases.

Surgery

VARICOSE VEINS *by* R. Rowden Foote. 214 pp., ill. Butterworth & Co., London. 32*s.* 6*d.*

DARMBRAND: ENTERITIS NECROTICANS *by* K. Hansen *et al.* 212 pp., ill. Grune & Stratton, New York City. $7.50

DIE INDIVIDUELLE REAKTIONSWEISE BEI CHIRURGISCHEN INFEKTIONSPROZESSEN *by* Gerd Hegemann. 126 pp., ill. Springer, Berlin. 12 M.

ANÉVRYSMES ARTÉRIELS ET FISTULES ARTÉRIOVEINEUSES: PHYSIOLOGIE PATHOLOGIQUE ET TRAITÉMENT *by* René Leriche. 312 pp., ill. Masson & Co., Paris. 900 fr.

BLOOD AND PLASMA TRANSFUSIONS *by* Max M. Strumia *and* John J. McGraw, Jr. 497 pp., ill. F. A. Davis Co., Philadelphia. $7.50

Medicine

ATOMIC MEDICINE *edited by* Charles F. Behrens. 416 pp., ill. Thomas Nelson & Sons, New York City. $7.50

LIPPINCOTT'S QUICK REFERENCE BOOK FOR MEDICINE AND SURGERY *by* George E. Rehberger. 14th ed. 1,723 pp., ill. J. B. Lippincott Co., Philadelphia. $20

hen steam inhalation is indicated, consider the advantages of VICKS VAPORUB in STEAM. Its well-balanced formula contains 7 volatilizing ingredients including Menthol, Thymol, Camphor and Oil of Eucalyptus. VAPORUB's medicated vapors are soothing when dryness and irritation accompany the respiratory distress...

And VICKS VAPORUB is already on hand in most homes.

OUTLINES OF INTERNAL MEDICINE *edited by* C. J. Watson. 6th ed. 528 pp., ill. William C. Brown Co., Dubuque, Iowa. $12

Obstetrics & Gynecology

ATLAS OF OBSTETRIC TECHNIC *by* Paul Titus. 2d ed. 197 pp., ill. C. V. Mosby Co., St. Louis. $7.50

DISEASES OF WOMEN *edited by* Clifford White, Frank Cook, *and* Sir William Gilliatt. 8th ed. 461 pp. Edward Arnold & Co., London. 25s.

VOLUNTARY PARENTHOOD *by* John C. Rock *and* David Loth. 308 pp. Random House, New York City. $3.50

Ophthalmology

BIOMICROSCOPY OF THE EYE: SLIT LAMP MICROSCOPY OF THE LIVING EYE *by* Milton L. Berliner. 2 vols., 1,512 pp., ill. Paul B. Hoeber, New York City. $50

OPHTHALMIC MEDICINE *by* James Hamilton Doggart. 340 pp., ill. J. & A. Churchill, London. 32s.

MODERN PRACTICE IN OPHTHALMOLOGY, 1949 *edited by* H. B. Stallard. 525 pp., ill. Paul B. Hoeber, New York City. $12.50

Orthopedics

FRACTURES AND DISLOCATIONS IN GENERAL PRACTICE *by* John Hosford; *revised by* W. D. Coltart. 2d ed. 300 pp., ill. H. K. Lewis & Co., London. 21s.

FRACTURES *by* Paul B. Magnuson *and* James K. Stack. 5th ed. 537 pp., ill. J. B. Lippincott Co., Philadelphia. $7

MEDICAL CLINICS ON BONE DISEASES: A TEXT AND ATLAS *by* Isidore Snapper. 2d ed. 308 pp., ill. Interscience Publishers, New York City. $20

Physiology

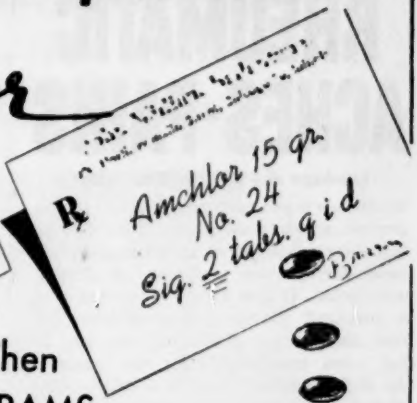
WEITERE FORTSCHRITTE IN DER BLUTGERINNUNGSLEHRE *by* Karl Lenggenhager. 243 pp., ill. Grune & Stratton, New York City. $5.50

IRON METABOLISM AND ITS CLINICAL SIGNIFICANCE *by* A. Vannotti *and* A. Delachaux. 267 pp., ill. Grune & Stratton, New York City. $6.50

NERVOUS AND NEUROHUMORAL REGULATION OF INTESTINAL MOTILITY *by* W. B. Youmans. 139 pp., ill. Interscience Publishers, New York City. $4.75

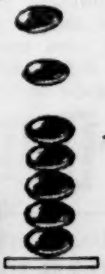
Which do you prescribe?

or



When
8 GRAMS
Ammonium Chloride
are indicated

WHICH WOULD YOUR PATIENT PREFER?



AMCHLOR
(BREWER)

ONE GRAM ENTERIC COATED TABLET OF AMMONIUM CHLORIDE

Sample and Literature on request

Brewer EST. 1865

BREWER & COMPANY, INC.
WORCESTER 8, MASSACHUSETTS U.S.A.

Dietetics

POLLEN-SLIDE STUDIES *by* Grafton Tyler Brown. 135 pp., ill. Charles C Thomas, Springfield, Ill. $6

BRIDGES' DIETETICS FOR THE CLINICIAN *edited by* Harry J. Johnson. 5th ed. 898 pp. Lea & Febiger, Philadelphia. $12

Pediatrics

ADVANCES IN PEDIATRICS, VOL. 4 *edited by* S. Z. Levine *et al.* 326 pp., ill. Interscience Publishers, New York City. $6.50

CHILDREN IN CONFLICT: TWELVE YEARS OF PSYCHOANALYTIC PRACTICE *by* Madeleine L. Rambert. 214 pp., ill. International Universities Press, New York City. $3.25

THE 1949 YEAR BOOK OF PEDIATRICS *edited by* Henry G. Poncher *and* Julius B. Richmond. 560 pp., ill. Year Book Publishers, Chicago. $4.50

Legal Medicine

AIDS TO FORENSIC MEDICINE AND TOXICOLOGY *by* W. G. Aitchison Robertson; *edited by* John H. Ryffel. 12th ed. 170 pp. Bailliere, Tindall & Cox, London. 4s 6d.

Economics

THE NATIONAL HEALTH SERVICE *prepared by* the British Ministry of Health and the Central Office of Information. 36 pp. British Information Service, New York City. 20¢

BACKGROUNDS OF SOCIAL MEDICINE, papers presented at the Annual Conference of the Milbank Memorial Fund, November 19-20, 1947. 200 pp. Milbank Memorial Fund, New York City. $1

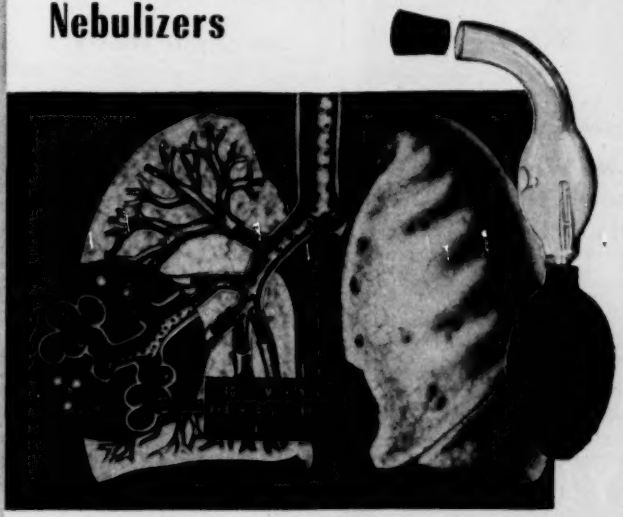
Miscellaneous

SHAW ON VIVISECTION *compiled and edited by* G. H. Bowker for the National Anti-Vivisection Society. 65 pp. George Allen & Unwin, London. 5s.

LENGTH OF LIFE *by* Louis I. Dublin, Alfred J. Lotka *and* Mortimer Spiegelman. Rev. ed. 379 pp. Ronald Press, New York City. $7

AIR POLLUTION IN DONORA, PA. *by* H. H. Schrenk *et al.* 173 pp., ill. U.S. Government Printing Office, Washington, D.C. $1.25

For Penicillin and Other Aerosol Therapy, Prescribe DeVilbiss Nebulizers



• The DeVilbiss No. 40 Nebulizer produces a remarkably uniform aerosol, the mass of particles ranging from 0.3 to 2 micra which effectively reach the lungs, bronchi and alveolar sacs.[1, 2].

A nasal attachment, available for use with the No. 40 Nebulizer, adds to the versatility of the instrument and makes it suitable for prescription when aerosol therapy is indicated for either the nasal tract or the lungs and bronchi.

References:

1. **ABRAMSON, H. A.:** "Principles and Practice of Aerosol Therapy of the Lungs and Bronchi", Annals of Allergy, Vol. 4, Nov.-Dec., 1946.

2. **BRYSON, V., SANSOME E., AND LASKIN, S.:** "Aerosolization of Penicillin Solutions", Science 100: 33, July 14, 1944.

THE DEVILBISS COMPANY
Toledo 1, Ohio

PATIENTS
. . . I Have Met

The editors will pay $1 for each story published. No contributions will be returned. Send your experiences to the Patients I Have Met Editor, MODERN MEDICINE, 84 South Tenth St., Minneapolis 3, Minn.

Orthographer Wanted

Mrs. H, calling the doctor on the phone, said, "Doctor, my little boy is troubled with rheumatism."

"Really," inquired the M.D., "How did he get it?"

"He hasn't got it," replied Mrs. H. "He just doesn't know how to spell it."
—M.C.

"I'm sorry, the doctor went to see the wrestling matches."

Silver Lining

There was a woman who liked to play bridge. Her husband said he'd divorce her unless she got home in time to make supper. She did well for a while, and then came one of those hands. Being late, she decided to make his favorite dish—hassenpfeffer. She went to the delicatessen and bought condiments and peppers and catsup. Then to the butcher and bought a skinned rabbit. On the way she bumped into a drunk and fell down, dropping the rabbit and breaking the bottle of catsup. The drunk looked at her and shook his head. Then patting her shoulder he said, "Don't cry, lady, it would have been a moron anyway. Look at the ears on it."—J.M.

"Do infants enjoy infancy as much as adults enjoy adultery?" asks J.F.S.

Strong from wrist to finger tips

THIN? Yes, these B. F. Goodrich surgeons' gloves are *tissue-thin* so that your touch is almost as sensitive as when no gloves are worn.

Strong? Yes, these B. F. Goodrich surgeons' gloves give you the protection you need . . . protection without weak spots or heavy spots. From the wrist to the tips of the fingers . . . even *between* the fingers where many gloves are weak . . . these gloves have the strength that means longer wear, better service. It's a miracle of precision production that makes this unique combination of thinness and strength possible. You get this combination no matter which type of B. F. Goodrich glove you choose. There are three types:

B. F. Goodrich "Miller" brand surgeons' gloves— Regular wrist. Sizes 6 to 10, including half sizes. White or brown. "Smooth" or "Cutinized" surface.

B. F. Goodrich "Miller" brand examination gloves— Short length cuff. Sizes 7 to 9, including half sizes. White only.

The new B. F. Goodrich "Special Purpose" glove— Created for those who develop an allergic dermatitis when using ordinary rubber gloves. Sizes 6½ to 9½, including half sizes. Look for the identifying green band on the cuff.

Order B. F. Goodrich "Miller" brand gloves from your hospital or surgical supply dealer. *The B. F. Goodrich Company, Sundries Division, Akron, Ohio.*

B.F.Goodrich

Surgeons' Gloves

Discerning Son

My boss, an internist, has two sons—Tom, aged three and George, aged six. One evening recently, Tom approached his father, and after seriously regarding him for a moment, asked, "Daddy, are you a doctor?"

Before his father could reply, young George answered for him, "Yes, he's a doctor, but he doesn't do anything. He doesn't bring babies or cut up anybody, he just sits and looks at them."—M.M.M.

Then there was the corpulent lady who said she would rather run her sewing machine than to run herself, because the sewing machine had only one bobbin.—H.W.D.

"Ask him which he wants me to do—have a liquid diet or stay in bed?"

What Better Place?

(Headline seen by J. C. in a Baltimore newspaper)

"British Stock of Diapers Near Bottom"

Explanation Enough

In searching for a possible etiologic mechanism of a contact dermatitis of the hands, the usual questions regarding occupation were asked. Failing to bring out a possible occupational cause, the doctor asked the patient if he had any hobbies.

The man promptly replied, "No. I am not married."—H.L.K.

THE LAXATIVE FOR *judicious* THERAPY

because of its

Gentle, Effective Action

Phospho-Soda (Fleet)'s* action is prompt and thorough, free from any disturbing side effects. That's why so many modern authoritative clinicians endorse it . . . why so many thousands of physicians rely on it for effective, yet judicious relief of constipation. Liberal samples will be supplied on request.

*Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm. Both Phospho-Soda and Fleet are registered trade marks of C. B. Fleet Company, Inc.

C. B. FLEET CO., INC. • LYNCHBURG, VIRGINIA

Beyond His Capacity

I recently told a patient, "I need a specimen of your urine. Please save it for twenty-four hours."

"I am sorry, Doctor, but I can't do that," he replied. "I can't keep it in that long."—M.T.

Driver's License

A young woman, obviously pregnant, crossed the street against the signal. A big truck ground to a stop with brakes screeching. The driver leaned out of the cab and said, "Lady, you can get knocked down too."—R.L.P.

"My backache," complained the patient, "wasn't relieved by 'angelic balm.' "—J.C.B.

An Entirely Different Matter

After admitting a primipara the nurse asked, "Have your membranes ruptured?"

"I should say not," the primip replied indignantly. "I'm expecting a baby!"—N.H.

"Anybody know how to deliver a baby in a taxi?"

Anything to Oblige

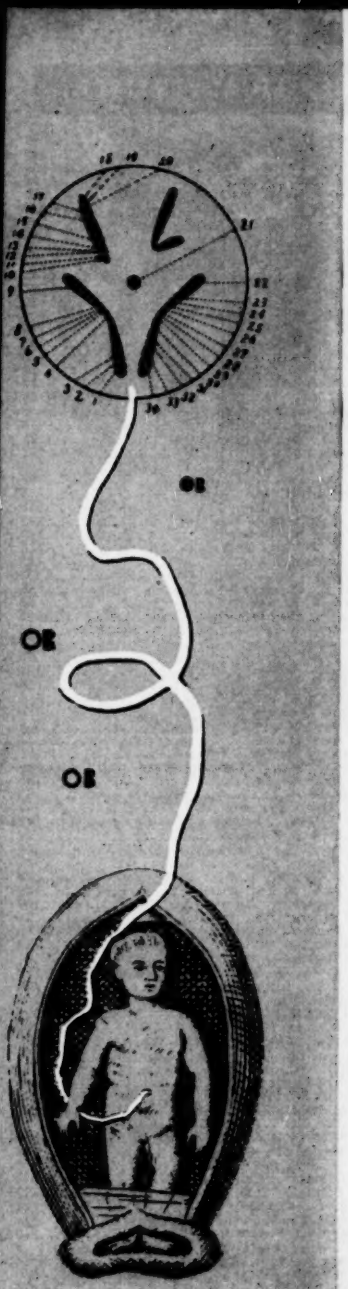
A plump, vacuous lady delayed the elevator while she studied the building directory.

"What are you looking for?" inquired the elevator operator.

"Dressmaker," the lady replied.

"There are only doctors in this building," said the operator.

"Send her to us," quipped a waiting doctor in a whisper. "We're glad to whip up a dress anytime."—D.L.



WHAT GOOD ARE THE GENES AND CHROMOSOMES IF THE FETUS IS STARVED?

The life-line between the maternal organism and the unborn must be kept open. Both must receive optimal nutrition—especially of those critical supplies—calcium, iron and the essential vitamins—to insure the priceless heritage of sound youth.

OBRON is specially designed for the OB patient. Note the 15 grains of dicalcium phosphate* per capsule plus the abundance of vitamins in adequate amounts to assure continuous flow of these nutrients from mother to child. Try OBron on your next OB case.

ALL IN ONE OBRON CAPSULE

*Dicalcium Phosphate, Anhydrous	*768 mg.*
Ferrous Sulphate U.S.P.	*64.8 mg.*
Vitamin A (Fish-Liver Oil)	*5,000 U.S.P. Units*
Vitamin D (Irradiated Ergosterol)	*400 U.S.P. Units*
Vitamin B_1 (Thiamine Hydrochloride	*2 mg.*
Vitamin B_2 (Riboflavin)	*2 mg.*
Vitamin B_6 (Pyridoxine Hydrochloride)	*0.5 mg.*
Vitamin C	*37.5 mg.*
Niacinamide	*20.0 mg.*
Calcium Pantothenate	*3.0 mg.*

**Equivalent to 15 grains Dicalcium Phosphate Dihydrate*

ONE OF THE ROERIG BALANCED FORMULAE

J. B. ROERIG AND COMPANY

536 LAKE SHORE DRIVE · CHICAGO 11, ILLINOIS

INDEX TO ADVERTISERS

IN PRENATAL THERAPY

ULVICAL "Ulmer"

ULVICAL "Ulmer" combines all the prenatal patient's requirements into one easy-to-take, well-tolerated, economical tablet. As a dietary supplement during pregnancy and lactation, it supplies sufficient Iron to correct or prevent any tendency toward anemia, minimum daily requirements of Calcium and all the essential Vitamins.

FORMULA

Vitamin D (Irradiated Yeast)	200 USP Units
Vitamin B_1 (Thiamine Chloride)	1.0 Mg. (167 USP Units)
Vitamin B_2 (Riboflavin)	2.0 Mg. (1,000 Micrograms)
Vitamin A (Ester)	1500 USP Units
Vitamin C (Ascorbic Acid)	16 2/3 Mg. (333 USP Units)
Vitamin E (Tocopherol)	2 Mg.
Calcium Pyrophosphate	7½ Grs. (Ca 150 Mg.) (P 120 Mg.)
Ferrous Sulphate (Dried) (eq. Approx. to 5 gr. USP)	2 Grs. (Fe 38 Mg.)

To eliminate the possibility of intolerance, the Ascorbic Acid and Thiamine Hydrochloride are released and utilized in the stomach while the other factors are not released until they enter the small intestine. Endorsed and prescribed by leading obstetricians, ULVICAL "Ulmer" provides assured results in the recommended dosage of 2 to 6 tablets per day.

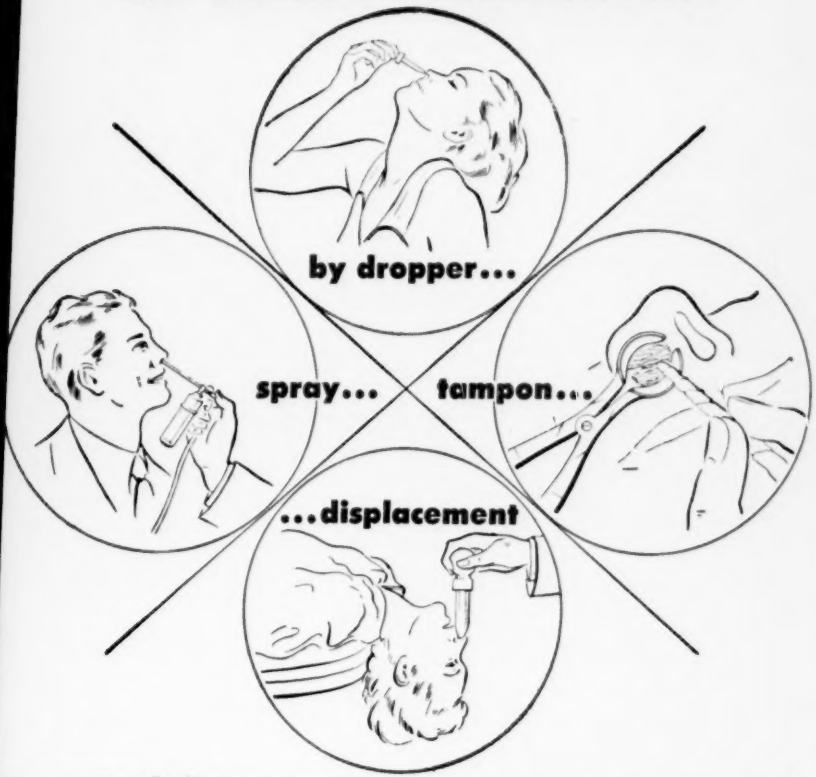
STRICTLY ETHICAL—NOT ADVERTISED TO THE LAITY

ULMER PHARMACAL COMPANY

MINNEAPOLIS Manufacturing Chemists MINNESOTA


Ramses
VAGINAL JELLY*
1
2 —effective barrier action
3 —safe for continued use
4 —esthetically agreeable
5 —not excessively lubricating
VAGINAL
JELLY
ACCEPTED
COUNCIL ON
PHARMACY
AND
CHEMISTRY
AMERICAN MEDICAL ASSOCIATION
S BY WEIGHT
OL MONOLAURATE
ACID 1%
HOL 5%
T PENDING
GHT 5 OUNCES
UFACTURED BY
SCHMID, INC.,
ORK, .. N.Y.
Ramses
JULIUS SCHMID, INC.
423 West 55th St., New York 19, N.Y.

IN COLDS...SINUSITIS



neo-synephrine hydrochloride constricts the engorged mucosa surrounding the ostia, permitting free entrance of air and free drainage of secretions. Neo-Synephrine hydrochloride affords prompt and prolonged decongestion with virtually no irritation or congestive rebound.

neo-synephrine®

HYDROCHLORIDE

BRAND OF PHENYLEPHRINE HYDROCHLORIDE

¼% solution (plain and aromatic), 1 ounce bottles; 1% solution, 1 ounce bottles; ½% water soluble jelly, ⅝ ounce tubes.

Neo-Synephrine, trademark reg. U. S. & Canada

Winthrop-Stearns INC.

NEW YORK 13, N. Y. WINDSOR, ONT.

MODERN MEDICINE
84 S. 10 St. Minneapolis 3, Minn.

POSTMASTER: If undeliverable FOR ANY REAS notify sender, stating reason on form 3547.

Sec. 34.66, P. L. & R.
U. S. POSTAGE
PAID
PERMIT No. 29
Long Prairie, Minn.